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ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2087



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EDITORIAL STRESSES QUALITY, INNOVATION OF PRODUCT

Prague RUDE PRAVO in Czech 12 Nov 80 p 1

[Text] While speculations about the development of the world economy at the threshold of the eighties differ in many respects, they agree in some points. Above all they concur that the suppliers will have the determining voice in raw materials and foodstuffs market, and the consumers will have it in the finished products market. They both will impose conditions concerning the quantity, quality, prices and terms of payment. Timely realization of this is especially important for a country such as Czechoslovakia, which must cover the predominant part of its raw material needs by imports and on the other hand can obtain currency for payments through the export of finished products. In other words, the marketing potential of our products will determine to what degree our import needs are satisfied.

Preliminary compilation of the results of the Sixth Five-Year Plan has shown that our main export branch—heavy engineering—will not reach the stipulated goals despite the evident growth of its production. This is not because of insufficient quantity, but because of quality and technical levels which are not high enough to allow us to obtain the necessary amount of currency for payments through exports. One of the important requirements considered for the Seventh Five-Year Plan will be a further increase in exports, but by prices rather than the volume of materials. This clearly suggests—and in view of the limited possibilities for import of raw materials and supplies no other alternative is even possible—that the technical levels and the quality of production must be greatly increased.

And how can we raise the technical levels and quality? Mainly by applying technological advances on a broad scale. This does not mean merely solving partial technical objectives, however. It means raising the technical level of the key elements of production, of selected sectors and their production, as was emphasized at the 18th Session of the CPCZ Central Committee.

The emphasis on the prompt and broad application of technological knowledge is not dictated only by the interests of the foreign trade, satisfactory representation in the international exchange of goods, and division of labor. We must realize that the social economic development of our society will depend more and more on how our economy will manage to acquire new technology and how quickly it will be able to apply it in practice. And this naturally does not concern only the application of the work achievements of the domestic scientific research base, which is dealing with some 30,000 projects every year. Further substantial expansion of the cooperation with the Soviet Union and other socialist countries, judicious procurement of licenses, and especially full utilization of inventions and improvement suggestions, about 300,000 of which are registered yearly in the CSRS, offer great possibilities.

This is an enormous potential of possibilities, new knowledge and strength which so far unfortunately has been inadequately utilized and therefore has not brought about a satisfactory effect. The ranks of our producers appear firmly convinced that they are doing their best. Price rating on the world market has shown, however, that they considerably overvalue their capabilities and are disinclined to evaluate their products according to the objective criteria, compare them with the top world standards and reach proper conclusions. Lack of objectivity in evaluation of the standards of production, and sometimes even gross disregard of the shortcomings in the quality of products, give rise to a poor valuation of our products on the foreign markets, and on some occasions to additional expenses needed to correct defects. What is one to think about the standards of the management, control, and production of an enterprise which delivers abroad a machine painted beautifully green, including a whole dozen mounting screws. This makes them, and the machine as well, useless without laborious and expensive repairs (paid for in hard currency). In such an enterprise the personnel are far away from quality and even further from an improved technical level; but they are easily upset whenever anybody points out their mistakes.

It is not by chance that the Set of Measures for Improving the Planned Management System of the National Economy demands quite specifically that the production enterprises raise concurrently the quality of production, the rate of innovation, the technical level and the export capabilities. They are all interdependent.

Tens of thousands of new and innovative products were introduced into production in the Sixth Five-Year Plan. But that has not been enough, because not all the novelties and innovations had high technical parameters and useful properties. It is estimated that not quite 17 percent of the total number of new products met world standards. That is no great record, this is no way "to make our mark in the world." In addition, many producers cannot meet the demands for servicing, maintenance and deliveries of spare parts. This also plays an important role in the buyer's decision whether to buy our product.

The problem of spare parts is being discussed. Its solution is usually sought (less often realized) in the expansion of production capacities, while the most effective solution lies elsewhere: in the high quality and technical level of production assuring high reliability of use without breakdowns. We have to keep in mind that the innovation cycle is getting shorter and shorter. The anticipated aesthetic lifespan of technologically progressive products in the world market amounts today to only 3 to 4 years. And for this reason the period of their development, which averages 5 to 6 years, must clearly be shortened, while at the same time the reliability of their operation (i.e. functional life) must be increased with minimum requirements for servicing and spare parts. Many world producers have shown that this can be done.

Our technological base is definitely neither small nor poorly equipped. It disperses its forces and resources too much, however, even though for several years it has been urged to concentrate them. We must evaluate objectively the situation and make the proper deductions for the strategy of technological policy; we must redirect the research potential toward product innovation and weigh carefully where to concentrate personnel and resources. In the hard world competition we cannot succeed in everything. We must select our objectives and strive for their realization.

The investment demands presented by production enterprises as the basic condition of any innovation represent the dark side of the implementation of expedient production changes. Every change of production naturally calls for new preparations or other necessities. Some enterprises, however, act as if they literally needed a new anvil, hammer and tongs for each new type of horseshoe.

All branches of industry, and engineering in particular, must raise the technical level of their production in the next five-year plan. The engineering ministries, production economic units and enterprises must adapt the structure and quality of production with greater initiative and flexibility to the requirements of foreign buyers. They must raise the technical level, reliability and lifespan of the products, improve their functional capabilities and insure proper maintenance. This requirement cannot be reduced in any way.

It is desirable that raising the technical levels and quality of engineering products be associated with better appreciation of the raw materials and supplies used, especially metals. To illustrate: we cannot make 100 engines with 99 crankshafts, but we can design the crankshaft so as to produce 100 of them from the material needed for 99. This is one of the effective ways of accommodating our needs for imports possibilities of obtaining them. And it is a very realistic way, because the material and energy requirements of our production far exceed comparable norms of other producers.

Apparently the time has come to make important changes also in the vocabulary of the producers who are confusing some terms. Reliability does not always equate with substantiality, and tradition does not mean to continue to produce the same item, on and on. Innovation must be reflected primarily in higher parameters of usefulness and the like. Similarly, perfect service does not mean providing heaps of spare parts, but designing, producing and installing the machine so that it essentially does not need any.

The sooner the producers learn that the higher technical levels and quality of production are a necessity of life, the better this will be for themselves and the whole society. There should be very few of those who realize it only after they run short of resources for funding and wages as the Set of Measures is enforced.

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GERMAN DEMOCRATIC REPUBLIC

CHEMICAL INDUSTRY'S ENERGY PROBLEMS ANALYZED

West Berlin DIW-WOCHENBERICHT in German Vol 47 No 47, 21 Nov 80 pp 485-490

[Analysis by Cord Schwartzau, German Institute for Economic Research, West Berlin: "The Chemical Industry in the GDR: Renaissance of Domestic Raw Materials Through Restriction of Oil Imports?"]

[Text] During the current five-year plan, the chemical production growth rates have been declining considerably. The growth target set for 1976/80 (7.6 percent annually) was given up as early as the beginning of the plan period. Instead of the 45-percent increase originally planned for the period from 1976 to 1980, a mere 30-percent rise now appears to be likely. Apparently the GDR has run into difficulties in regard to structural adaptation to the increasing shortage of raw materials in the international markets.

Structure-Related Data

The chemical industry of the GDR comprises--aside from the chemical industry proper--potash and rock salt production and the oil refining and plastics and rubber processing industries. In 1979, the GDR chemical industry totaled 340,000 employees--i.e. 11 percent of the manpower employed in the industrial sector as a whole--as against a labor force of 930,000 in the Federal Republic of Germany (within similar limits), i.e. approximately 12 percent of the manpower employed in the mining and manufacturing industries.¹ The GDR chemical industry's share of the total fixed assets of the industrial sector as a whole (approximately 20 percent) is twice as high as its manpower share (FRG: 22 percent).

In terms of gross production, the chemical industry is the second largest branch of GDR industry (14 percent). However, these GDR data are based on the plan prices of 1975. Calculated in actual prices, the chemical industry's turnover share may possibly have reached an order of magnitude close to the respective share of the Federal Republic of Germany (22 percent of the total turnover of the mining and manufacturing industries), for since 1976 there have been numerous price hikes in industry² that led to a relative increase in the prices of chemical products; as of 1 January 1976, the industrial wholesale prices of fuel oil and natural gas tripled.

The process of combine formation after 1978 has not significantly changed the organizational structure of the GDR's chemical industry, since in this branch of industry large-scale combines had been formed before. At the beginning of 1980, the two remaining VVB [associations of state enterprises]--pharmaceutical industry

and light chemical industry--were dissolved and three combines were formed. The Ministry for Chemical Industry now comprises over 15 combines employing a total of 310,000 workers;³ 80 percent of all employees in the chemical industry work in enterprises employing 1,000 and more workers.

In the last few years, the total labor force of the chemical industry has increased only insignificantly. In combines such as those in Bitterfeld, Buna, Leuna, Schwedt or Wolfen, there have only been minor work force changes. However, the expansion of the petrochemical industry and the industrial price adjustment in regard to these products have made themselves felt in regard to production and nominal turnover. In 1980, four combines--Schwedt Petrochemical Combine, "Walter Ulbricht" Leuna Works, Buna Chemical Works and Piesteritz Agrochemical Combine--employed nearly one-third of the labor force of the chemical industry and realized two-thirds of the total turnover at current prices. Investments in these four combines are to be continued. Thus in 1980/82, the value of the fixed capital of the Schwedt Petrochemical Combine is to be doubled, largely through the hitherto biggest chemical investment project of the GDR: Japan will supply facilities for the production of benzene and other aromatics. Since the prices of products of the first oil refining stage will be raised annually, beginning on 1 January 1980, the combines will soon account for more than 40 percent of the chemical industry's total turnover.

Observations on the Development of Petrochemistry

As late as 1964, even the production of fuel and lubricants was for the most part (90 percent) based on coal. The rapid expansion of primary oil processing in Schwedt (refineries), beginning in the mid-1960's, and the establishment of the GDR's first petrochemical center in Leuna marked the beginning of the transition to oil. However, it was not until the 1970's that petrochemistry assumed importance as a result of numerous large-scale projects: construction of a fertilizer plant--based on Soviet natural gas--in Piesteritz; expansion of the refinery capacities in Schwedt and utilization of gaseous by-products for the production of fertilizer; establishment of the Boehlen olefin complex for the manufacture of important elements needed in the production of synthetic materials (ethylene and propylene); establishment of a new refinery--intended to supply the Boehlen plant--in Zeitz and expansion of the oil-refining capacities in Boehlen; construction of a polyurethane plant in Schwarzheide and of an industrial power plant and a refinery in Leuna, and in 1979, establishment of processing facilities for synthetic materials in Buna (PVC) and Leuna (high-pressure polyethylene). During the period from 1970 to 1980, oil consumption doubled, although it remained below the level of 23 million tons per year stipulated in 1976. The graph illustrates this by the example of the Schwedt Petrochemical Combine (established on 1 January 1970).

The sharp turnover increases in 1975/76 (from M 6.1 to 9.9 billion) and in 1977/78 (from M 11.2 to 18.0 billion) appear to be related to the oil prices. To be sure, the putting in operation of new petrochemical processing capacities is another factor contributing to this development. Thus, in the Boehlen oil refining plants, the share of substances usable in petrochemistry increased from 5.4 (1975) to 14.9 percent (1980); on a national scale, this share is to average 16.4 percent in 1980 (FRG: 8 percent). However, the sharp turnover rise of 1977/78 probably is for the most part attributable to price increases.⁴ The graph clearly shows that in 1977 the increase in oil use suddenly came to a halt. Consequently, quantitative

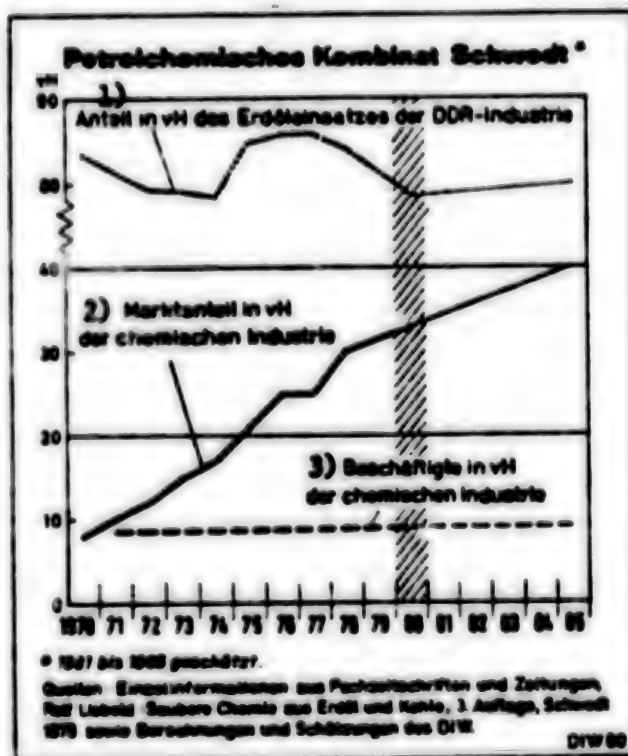
Combines Directly Subordinated to the Ministry for Chemical Industry

Direkt unterstellte Kombinate des Ministeriums für Chemische Industrie

Kombinat 1)	2) Beschäftigte	3) Hauptprodukte
Chemieanlagenbaukombinat, Leipzig-Grimma	4) 32 000	Erdölverarbeitungsanlagen, Anlagen zur Kunststoffchemie
Chemiefaserkombinat „Wilhelm Pieck“, Schwarza	5) 29 000	Synthetische Faserstoffe
Chemiekombinat, Bitterfeld	6) 32 000	Grundchemikalien, Soda, Organische Farbstoffe, Pflanzenschutzmittel
Chemische Werke Buna, Schkopau	7) 30 000	Synthetischer Kautschuk, PVC, Lösungsmittel, Chlor, Natronlauge
Kombinat Agrochemie, Piesteritz	8) 15 000	Stickstoffdünger, Schwefelsäure, Schweißcarbid
Kombinat Haushaltschemie, Genthin	9) 8 000	Waschmittel, Kerzen, Autopflegemittel
Kombinat Lacke und Farben, Berlin	10) 8 000	Lacke und Farben, Pigmente, Druckfarben
Kombinat Plast- und Elastverarbeitung, Berlin	11) 32 000	Zulieferprodukte aus Plast- und Elastmaterial, Schläuche
Kombinat Synthesewerk, Schwarzheide	12) 12 000	Polyurethane (Hartschaumstoffe), Munition und Sprengstoffe
Kosmetikkombinat Berlin	13) 7 500	Kosmetika
Leuna-Werke „Walter Ulbricht“, Leuna	14) 30 000	Düngemittel, Plastgrundstoffe, Leime, Kraftstoffe, Katalysatoren
Petrochemisches Kombinat, Schwedt	15) 30 000	Produkte der Mineralölindustrie, Äthylen und Propylen, Schweißprodukte aus Braunkohle
Pharmazeutisches Kombinat Germed, Dresden	16) 15 000	Pharmazeutika
Photochemisches Kombinat, Wolfen	17) 18 500	Fotomaterial, Magnetbänder
Reifenkombinat, Fürstenwalde	18) 11 000	Reifen, neu und runterneuert

Key:

- Combine
- Work force
- Main products
- Leipzig-Grimma Chemical Installations Construction Combine--oil-refining & plastics-processing installations
- Schwarza "Wilhelm Pieck" Chemical Fiber Combine--synthetic fabrics
- Bitterfeld Chemical Combine--basic chemicals, soda, organic dyes, plant-protective agents
- Buna Schkopau Chemical Works--synthetic rubber, PVC, solvents, chlorine soda lye
- Piesteritz Agrochemical Combine--nitrogen fertilizer, sulfuric acid, welding carbide
- Genthin Household Chemistry Combine--detergents, candles, automobile polish
- Berlin Lacquer and Paint Combine--lacquers, paints, pigments, printing ink
- Berlin Plastics- and Rubber-Processing Combine--fabricating parts made of plastics or rubber, hoses
- Schwarzheide Synthesis Combine--Polyurethane (hard aerated plastics), ammunition, explosives
- Berlin Cosmetics Combine--cosmetics
- "Walter Ulbricht" Leuna Werke--fertilizer, basic plastics, glue, fuel, catalysts
- Schwedt Petrochemical Combine--oil industry products, ethylene, propylene, dry-distillation products derived from brown coal
- Dresden Germed Pharmaceutical Combine--pharmaceutical products
- Wolfen Photochemical Combine--photographic materials, magnetic tapes
- Fuerstenwalde Tire Combine--tires, new and retreads



Key:

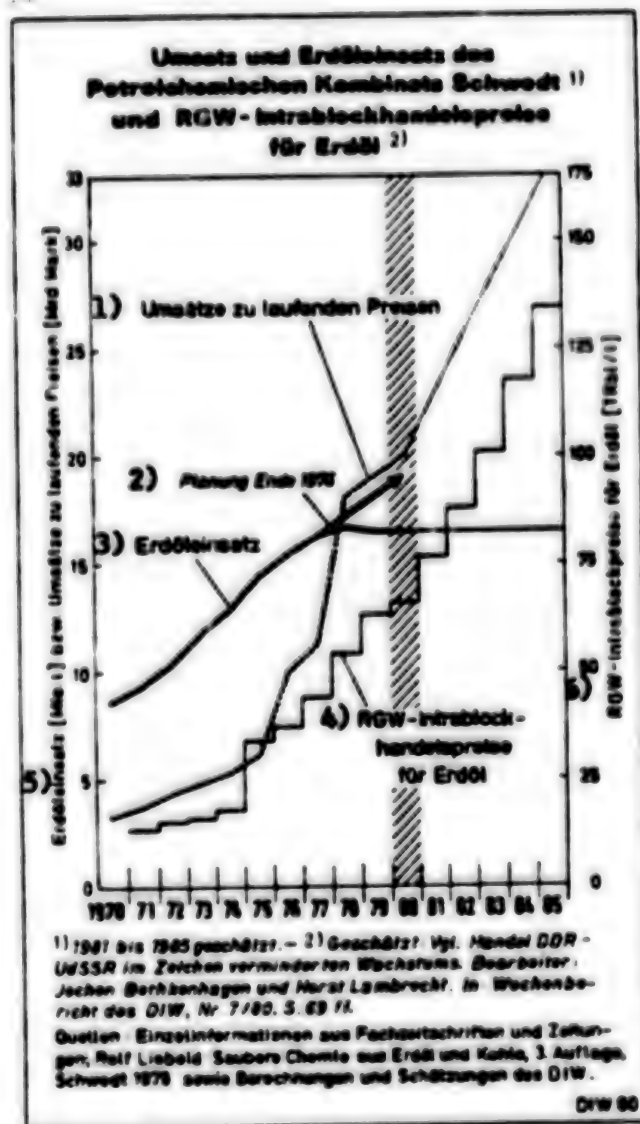
- | | |
|--|---|
| 1. Oil use in GDR industry (X) | 3. Labor force (X) of the chemical industry |
| 2. Market share (X) of the chemical industry | * 1981 to 1985: Estimate |

Sources: Individual data obtained from technical journals and newspapers.
 Rolf Liebold, "Saubere Chemie aus Erdöl und Kohle" [Clean Chemical Processes Based on Oil and Coal], 3rd edition, Schwedt, 1979.
 Calculations and estimates by the DIW [German Institute for Economic Research].

production increases were feasible only within certain limits, even though the medium-term plans had stipulated an expansion of oil utilization. For this reason, the planned expansion of the refinery capacities has not taken place.

Whereas the 1980 plan had projected oil production capacities of 25 million tons per year (Schwedt: 19; Leuna: 6), the presently available facilities are capable of producing 23 million tons per year, although they can be fully utilized only with difficulty. In view of the quantitative limitations on the shipments from the Soviet Union (19 million tons per year) and in view of the problems regarding the financing of additional imports (so far approximately 2 million tons per year), there arises the question whether the presently available petrochemical capacities and the installations that are being constructed in Leuna and Schwedt can be supplied with a sufficient quantity of primary products. At the given level of oil use, this is technically feasible by means of increased output of primary petrochemical products, but it presupposes appropriate input (investments and energy) and economies in regard to other products, above all fuel oil.

Turnover and Oil Use of the Schwedt Petrochemical Combine¹⁾ and CEMA Intra-Bloc Trade Prices for Oil²⁾



Key:

- | | |
|---|--|
| 1. Turnover at current prices | 5. Oil use (mill. tons) and turnover at current prices (bill. marks) |
| 2. Planning, end of 1976 | 6. CEMA intra-bloc prices for oil (transfer rubles/ton) |
| 3. Oil use | |
| 4. CEMA intra-bloc trade prices for oil | |

Footnotes in the graph: 1) 1981 to 1985: Estimate. 2) Estimate: See J. Bethkenhagen and H. Lambrecht, "GDR-USSR Trade Marked by Reduced Growth," DIW-WOCHENBERICHT, No 7, 1980, pp 69 ff. Sources: Individual data from technical journals and newspapers. R. Liebold, "Saubere Chemie aus Erdöl und Kohle" [Clean Chemical Processes Based on Oil and Coal], 3rd edition, Schwedt, 1979. Calculations and estimates of the DIW [German Institute for Economic Research].

The share of fuel oil, which presently amounts to 40 percent of the GDR's total oil-refining volume, is to be systematically reduced (1990 plan: 30 percent). This makes considerable reductions in consumption inevitable. In 1979, Honecker--addressing the first kreis [GDR administrative unit] secretaries of the Party--demanded that as a fuel, oil be replaced by brown coal as soon as possible and that the available fuel oil installations be converted to brown coal.⁵ The tripling of the industrial sales prices of fuel oil and natural gas as of 1 January 1976 and the announcement of further regular, annual price hikes in the 1980's put appropriate emphasis on this project. For the time being, it is in the chemical industry itself that economies can be implemented. As late as the end of 1978, one-third of the processing energy used in Schwedt was produced by 120 fuel oil-fired furnaces; both the power plant of the Schwedt oil refining plant and the Leuna Industrial Power Plant North that was completed as late as 1976 operate on fuel oil. In Leuna, the conversion process has already begun.

In evaluating the efficiency of the future installations in Schwedt and Leuna, one must take into consideration that both the increases in power fuel output (more gasoline and Diesel fuel) and the more thorough cracking of the oil are characterized by a decline in energetic efficiency: The energy requirements per kilogram of end product will be increasing.

Finally, one should mention the fact that on account of long-term cooperation agreements with the CSSR, the GDR's short-term growth prospects in regard to the production of synthetic materials can be said to be positive. According to an agreement concluded in 1971 for the period from 1975 to 1985, the GDR will by 1979 supply the CSSR with over 500,000 tons of ethylene and 225,000 tons of propylene--the equivalent of 50 percent of the output of the Boehlen olefin complex--and in return will receive from the CSSR's processing facilities over 200,000 tons of (granulated) plastics. Beginning in 1980 ("reversal of the product flow"), the CSSR is to deliver ethylene to the GDR. In Buna (expansion of PVC production by 100,000 tons per year) and in Leuna (doubling of the production of high-pressure polyethylene to 120,000 tons per year), the GDR presently has at its disposal sufficient processing capacities for synthetic materials. The government agreement with the CSSR insures sufficient supplies for these two investment projects--the biggest of the GDR chemical industry--during the current five-year plan, without any additional oil processing being required on the part of the GDR.⁶

Increased Utilization of Domestic Raw Materials

In the future, the GDR will not be able significantly to expand its use of oil. Aside from improving the efficiency of crude oil utilization, the chemical industry will again increasingly rely on acetylene- or coal-based chemistry. The primary substance for the production of acetylene is carbide, which is produced from coal and lime with high input of electric power. So brown coal is to replace both fuel oil and basic petrochemical substances. Even now, the GDR is the biggest brown coal producer in the world (annual output: approximately 250 million tons). By 1990, the output is to be increased by 20 percent to 300 million tons per year--a goal the attainability of which is doubted even in the GDR.⁷

As early as the mid-1970's, the members of the SED Central Committee and the general directors of the Leuna and Schwedt petrochemical complexes emphasized the increasing importance of coal-based chemistry.⁸ The main reason underlying the

reactivation of coal-based chemistry was the search for alternatives to oil. At first, the focus was on the present--albeit antiquated--low-temperature carbonizing plants, which produced indispensable low-temperature carbonization products (e.g. tar and electrode coke) from brown coal. However, quite a few low-temperature carbonizing plants had been put out of operation, since they were technically outdated and energetically inefficient; moreover, the working conditions were unbearable; there was considerable environmental pollution and material and labor input was very high. Nevertheless, the low-temperature carbonizing plants in the GDR are still relatively significant: In 1976 alone, these plants processed 12.6 million tons of brown coal, i.e. 5.1 percent of the total output. As yet, however, the technical problems are largely unsolved.⁹

Until 1979, Buna, the sole producer of synthetic rubber (1977: 146,000 tons) and PVC (capacity in 1980: 300,000 tons), operated almost entirely on a carbochemical basis. The new chemical complex established by Hoechst AG for the production of PVC (polyvinyl chloride), vinyl chloride, chlorine¹⁰ and soda lye has received the first shipment of acetylene produced on a petrochemical basis (Boehlen). However, acetylene chemistry based on carbide will remain predominant; its international outstanding importance is actually going to be enhanced. Modernization of carbide production in the 1980's--to be implemented in Piesteritz as well as in Buna--is to bring output close to 1.5 million tons (1973: 1.35 million tons; 1979: 1.2 million tons per year) and above all to reduce the failure rate of the furnaces, some of which are 50 years old. Due to the fact that the GDR has for decades neglected basic research on the calcium carbide process, "The presently operative carbide furnaces are neither optimally designed nor do they meet the requirements concerning technical operation."¹¹

Acetylene chemistry produces the equivalent of 5 million tons of oil per year. In this field as well, the GDR obviously missed its chance of exploiting a technological advantage in the international arena. In the meantime, however, the GDR has concluded state agreements with the Soviet Union that are aimed at improving the technology of carbide production and its efficiency.

Prospects

In the GDR, as much as 4.5 million tons of oil products are burned in steam generators; substitution of these products would require 23 million tons of crude brown coal (substitution ratio: 1 : 5). Apparently, this conversion process is thought to take a relatively long time. Consequently, the plans for petrochemistry provide for long-term replacement of oil by coal--both in the low-temperature carbonization plants and in the carbide-based production of PVC--through reactivation of outdated technologies. The brown coal- and briquette-fired old installations have a much more unfavorable substitution ratio: Here it takes 9 to 10 tons of crude brown coal to replace 1 ton of oil; in addition, these plants require a high input of hydrogen. On the whole, the substitution process confronts the GDR's planning and organizational system with considerable problems.¹²

The Western countries are allocating large funds for research and test facilities so as to develop competitive procedures of direct coal gasification and liquification. In the GDR, it is planned by 1985 to bring together 150 scientists in the newly established Carbochemical Center (Boehlen); in collaboration with Soviet experts (government agreement of 1980), these scientists are to speed up the

Output of Selected Products

Produktion ausgewählter Erzeugnisse

1) Erzeugnis	2) Bundesrepublik Deutschland		3) GDR 1)			
	in 1000 t		4) 5)		5) Kopf der Bevölkerung (BRD = 100)	
			1978	1979	1978	1979
Bergbau 6)						
Rohbraunkohle 7)	100	131	261	254	861	714
Braunkohlenbriketts 8)	9,4	4,8	57,1	48,7	2 117	3 718
Mineralölverarbeitung 9)						
Benzin 10)	15 586	22 797	2 236	3 274	61	53
Dieselkraftstoff 11)	9 769	12 996	3 619	5 961	132	181
Chemie 12)						
Schwefelsäure 13)	3 620	4 120	1 099	952	187	84
Salzsäure 14)	649	945	76	105	43	40
Kalziumkarbid 15)	879	462	1 248	1 206	505	571
Kaliumgemittel 16)	2 306	2 616	2 420	3 395	374	476
Stickstoffdüngemittel 17)	1 568	1 346	395	675	89	238
Phosphatdüngemittel 18)	912	703	430	411	167	216
Soda 19)	1 334	1 401	676	860	181	223
Natriumhydroxid 20)	1 682	3 415	413	548	89	59
Vollwaschmittel 21)	465	657	25	118	18	66

1) Angaben für 1979 vorläufig. - 2) Ohne Rohbenzin.

Quellen: Statistische Jahrbücher für die Bundesrepublik Deutschland; Statistisches Taschenbuch der DDR, 1980; Chemiewirtschaft in Zahlen 1980 (Herausg. Verband der Chemischen Industrie e.V., Frankfurt/M.); Berechnungen des DIW.

Key:

- | | |
|--------------------------|--------------------------|
| 1. Product | 12. Chemical industry |
| 2. FRG | 13. Sulfuric acid |
| 3. GDR | 14. Hydrochloric acid |
| 4. Per capita | 15. Calcium carbide |
| 5. FRG | 16. Potash fertilizer |
| 6. Mining industry | 17. Nitrogen fertilizer |
| 7. Brown coal | 18. Phosphate fertilizer |
| 8. Brown coal briquettes | 19. Soda |
| 9. Oil refining industry | 20. Sodium hydroxide |
| 10. Gasoline | 21. Detergents |
| 11. Diesel fuel | |

Footnotes to the Table: 1) Data for 1979 provisional. 2) Excluding crude gasoline. Sources: FRG statistical yearbooks. GDR Statistical Pocketbook for 1980. "Chemiewirtschaft in Zahlen 1980" [The Chemical Industry in Figures, 1980], Frankfurt. Calculations of the DIW [German Institute for Economic Research].

development of modern technologies and equipment for the gasification and chemical processing of brown coal. Moreover, the GDR plans in the next few years to expand the work force of its chemical engineering sector by 5,000 personnel. However, a large part of the additional capacities will be committed to exports: Chemical installations, above all refineries and equipment for the Soviet oil fields, are among the preferential projects developed in the investment coordination work with the Soviet Union.

Thus, up to the end of the 1980's, new basic projects are not to be expected in coal-based chemistry. But as long as the return to coal and acetylene chemistry takes place only in the form of reactivation and expansion of old technologies, labor productivity and specific energy input will again be declining. The limited investment funds are one-sidedly concentrated on restricting these negative developments. According to declarations of intent made in CEMA countries, it is planned by 1990 to shift the production of basic chemical materials to the raw material sources and to expand the processing capacities of countries deficient in raw materials. But this is not likely seriously to aggravate the GDR's current problems in regard to raw materials and investments.

FOOTNOTES

1. An exact comparison of the statistical data is not practicable. All of the data for the Federal Republic refer only to enterprises of the mining and manufacturing industries employing more than 20 workers. In the industrial sector, the GDR statistics cover all state-owned enterprises employing more than 10 workers and they also include the energy and water supply sectors. The construction industry of both countries was not taken into account. Sources: GDR Statistical Pocketbook, 1980; GDR Statistical Yearbook, 1979; Statistisches Bundesamt Wiesbaden [Federal Office for Statistics, Wiesbaden], Technical Series 4, Series 4.1.1, 1979, three enterprises, pp 42-51.
2. They took place at the beginning of the years 1976, 1977, 1978 and 1980, respectively.
3. One must keep in mind that subordination to the Ministry for Chemical Industry is not equivalent with the chemical industry (sic): The ministry also comprises the chemical installations building industry (in terms of industrial statistics: machine and vehicle building), while the chemical industry includes potash and rock salt production (subordinated to the Ministry for Ore Mining, Metallurgy and Potash).
4. Doris Cornelsen, "Foreign Trade Burdens Are Reducing Growth Chances. Observations on the Situation of the GDR Economy at the 1979/80 Turn of the Year," DIW-WOCHENBERICHT, No 6, 1980, pp 59-67; here: pp 63 ff.
5. Erich Honecker, "Die naechsten Aufgaben der Partei bei der weiteren Durchfuehrung der Beschluesse des IX. Parteitages der SED" [The Next Tasks of the Party in the Further Implementation of the Resolutions of the Ninth SED Congress], Berlin, 1980, p 34. A good example is the new housing complex in Leipzig-Gruenau: Just completed (1978/80), the heating and warm-water installations of the 20,000 apartment units are already being modified for a linkup to a district heating system fed by a brown coal-fired power plant.

6. Government agreement of 12 November 1971; see NEUES DEUTSCHLAND, 13 Nov 71, p 2.
7. In this regard and on the following, see: G. Keil; H. Klare; and L. Ebner, "How Can We Meet the Chemical Industry's Requirements of Raw Materials and Energy Over the Long Term? Part II. Fossil Carbon Sources," WISSENSCHAFT UND FORTSCHRITT, No 4, 1977, pp 164 ff.
8. Thus Werner Frohn: "Coal-based chemistry is one of the matters troubling us, for we will be forced--in the interest of an optimal balance of all energy sources and raw materials--to make increased use of domestic brown coal, not only in the production of energy, but also as a chemical raw material. This entails crucial consequences for us and for the national economy as a whole. In the 1980's, we will have to continue operating outdated low-temperature carbonization plants; at the same time, we must improve their technical reliability so as to raise the efficiency of the procedures employed and to improve the working conditions of the employees involved." NEUES DEUTSCHLAND, 26/27 Nov 77, p 5.
9. "Another task is much more thoroughly to study low-temperature coke or at least to concern ourselves with it. This is necessary, because the low-temperature carbonization process has been neglected in the last few years. Generally speaking, there are some interesting ideas concerning substitution. But without intensive efforts, we will not be able to solve this economic problem." See Herbert Richter and Dieter Kalkreuth, "The Role and Significance of Brown Coal as a Raw Material for the Development of the Energy Sector and of the Chemical Industry. Results and Perspectives of Coal Refinement," CHEMISCHE TECHNIK, No 2, 1980, pp 61-64.
10. However, the electrolysis processes used in Bitterfeld for the production of chlorine and Buna are too energy-intensive. Although the obsolescent chlorate installation in Bitterfeld is to be replaced in a few years, it is presently being overhauled at great expense.
11. See K. Budde, "Observations on Problems Concerning Intensification of Carbide Production," CHEMIE IN DER SCHULE, No 1, 1979, pp 8 ff. Both in Piesteritz and in Buna, there have been frequent interruptions of the production process. The startup and shutdown of the furnaces entail great energy losses. Each of the three furnaces in Piesteritz requires 80 megawatts per hour, i.e. the total requirements are the equivalent of the output of a power plant. Carbide is produced when at 2,000°C the domestic raw materials coal and lime amalgamate in the arc of the furnace. Not everything is available at any time in sufficient quantity. The energy efficiency of the PVC production process based on carbide amounts to a mere 12 percent, while the material utilization rate amounts to 90 percent.
12. "Thus it is not sufficient merely to consider the material and energy utilization rates and the current input for the processes; above all, it is necessary to take into consideration the amounts of the investments. Such a complex evaluation of the processing procedures exceeds our capabilities." G. Keil and E. Apelt, "Fossil Carbon Sources Now and in the Future," WISSENSCHAFT UND FORTSCHRITT, No 5, 1980, pp 180 ff; here: p 183.

SIXTH 5-YEAR PLAN FOR NATIONAL ECONOMY, 1980-1985

Budapest: NEPSZABADSAG in Hungarian 21 Dec 80 pp 3-16 (Supplement)

[Text of the Sixth Five-Year Plan of the Hungarian People's Republic, 1981-1985; promulgated by Parliament on 18 Dec 1980]

[Text] The Sixth Five-Year Plan of the national economy aims to enhance the attainment of the social and economic goals embodied in the resolutions adopted at the 12th Congress of the MSZMP; it takes into consideration the experiences which have been learned up to this point in the course of the development of the national economy, as well as its foreseeable conditions.

The main economic task for the period of the Sixth Five-Year Plan of the national economy is to further strengthen the economic foundation of social development; to increase the efficiency of economic work, to reestablish and stabilize the equilibrium of the national economy by relying on the achievements of science and technology, and on international economic cooperation, especially on the economic integration among the member countries of the CEMA. We must preserve the achievements we have attained with respect to the standard of living, and we must improve the living conditions of the population.

Applicability of the Law

Article 1

During the period between 1 January and 31 December 1981, this law will determine the economic goals regarding the main directions, the rate of development, the major structural changes and the equilibrium of the Hungarian national economy, as well as the most important measures serving their implementation.

Part I

Chapter I

Main Goals of the Plan

General Econo-political Goals

Article 2

During the years between 1981 to 1985, we must further strengthen the technical and economic foundations of our socialist society, and increase the national wealth by developing the forces of production and by continually improving the relations of production. We must ensure that the standard of living which we have attained is preserved and further improved in accordance with the existing living conditions and possibilities.

Article 3

(1) The main direction of economic activity should be aimed at reestablishing and stabilizing the equilibrium of the national economy, and within it, the foreign economic balance. This must be attained by improving the efficiency of social production, by strengthening the export-oriented direction of its development, and by ensuring that the level of domestic consumption increases at a considerably slower rate than the national income.

(2) In order to vigorously improve our economic effectiveness, we must be more efficient in our practical utilization of modern scientific and technical achievements; we must expedite the modernization of the production structure, improve its international competitiveness and strengthen the qualitative characteristics of development. This effort is to be supported by a more encouraging and appreciative approach toward creativity, by increased self-reliance, initiative and responsibility on the part of the units of production and by improving the standard of leadership and organization.

(3) In the course of developing the national economy we must be more prompt and more flexible in adjusting to the changing foreign economic and domestic conditions.

(4) Taking into account our country's potentials and the interests of the national economy, we must further broaden and increase the effectiveness of our international economic relations. In the interest of economic progress we must expand our cooperation with the socialist countries and promote the development of socialist economic integration. We must consolidate our bilateral and multi-lateral relations by exploring further possibilities of profitable cooperation. In harmony with our foreign policy principles, we must broaden our economic relations with all developed capitalist and developing countries which are prepared to reciprocate on the basis of equality and mutual advantages.

(5) We must pay great attention to the stabilization of the internal equilibrium. With this end in mind, we must ensure that there is adequate harmony between supply and demand for investment and consumer goods; that solvent demands are properly met and, furthermore, that the equilibrium of financial processes is strengthened.

(6) To insure the security of our people's peaceful constructive work, and in view of the shaping of the international situation, we must strengthen our country's defense capabilities on the basis of the possibilities ensured by the development of the national economy.

The Rate of Economic Growth and Its Principle Ratios

Article 4

- (1) During the plan period, national income is to increase by 14 to 17 percent.
- (2) To expedite the attainment of the equilibrium, the rate of growth of the national income may fall somewhat behind the average growth rate of the plan period.
- (3) The rate of growth may exceed the projected target stated in (1) above only if it is based on a more favorable improvement of efficiency than planned, and if, by changing the production structure, it contributes to improving the equilibrium of the national economy.

Article 5

- (1) In order to improve the foreign economic situation of the national economy, and to bring about a proper harmony between production and utilization, consumption and stockpiling together should increase at a considerably slower rate than the national income. During the first years of the plan period domestic consumption may not increase substantially and within this stockpiling should decrease.
- (2) Popular consumption should increase by 7 to 9 percent; investments in the socialist sector should be at the level of the previous five-year plan period. Within the internal utilization of the national income, the ratio of consumption and stockpiling should be 81 to 83 percent and 17 to 19 percent, respectively.
- (3) The accumulated national wealth should increase by 22 to 25 percent, and within this the increase of the stock of fixed assets in operation should amount to 26 to 28 percent.

Scientific Research and Development

Article 6

- (1) We must increase the effectiveness of scientific research; we must adjust better to the prevailing trends of international economic and technical development, by taking into account our potentials.
- (2) We must place special emphasis on technical and agricultural research with immediate economic objectives, as well as on developments directly connected with such research. We must, in accordance with their significance, support all basic research which is in harmony with our socio-economic objectives and which promise outstanding results.
- (3) In selecting our goals, priority must be given to those research projects which aim to promote greater efficiency in exploiting, and rational approaches to utilizing our natural treasures and resources; more sensible uses of energy; an improvement of the characteristics of basic and structural materials, and the profitability of their utilization; the creation and introduction of new, modern

materials, the modernization of the most important technologies; an increase in agricultural yields and the broadening of the scope of biological, genetic and soil research-oriented knowledge which is the basis of such an increase; the opening up of the social structure, the improvement of economic management, and the development of the educational-instructional system.

(4) In order to speed up progress, we must encourage the practical utilization of the new achievements of science in every aspect of socio-economic life; we must expedite the spreading and local acceptance of scientific and technological achievements aimed at improving efficiency.

(5) The network and organization of research institutions must be better adjusted to our primary research tasks and to the requirements of success.

(6) To speed up technical progress, the opportunities offered by international cooperation, including those stemming from the technical and trade relations of our enterprises must be made better use of.

(7) Of the national income earmarked for internal utilization, 3 percent may be spent for research and development. In allocating the material and intellectual resources to be expended for purposes of scientific research and technical development, we must give preference to those tasks listed in the National Medium-Range Research and Development Plan and other high-priority research and development programs, which if completed will significantly increase the effectiveness of social production.

Directions of Production Development

Article 7

The development of production should be aimed at effectively improving the national economic equilibrium. The increase in production should, to a great extent, bring about a growth in exports. In addition, domestic marketing, which meets solvent demand quantitatively, qualitatively as well as structurally, must also be made possible including the substitution of more economical domestic production for a portion of foreign imports.

Article 8

In order to make the production process more efficient,

- our natural resources must be rationally utilized, in harmony with our economic possibilities;
- the per unit material and energy use of production must be reduced;
- special attention must be given to making rational and economic savings a reality, and the collection and recycling of wastes and secondary products must be accelerated;

- keeping in mind the equilibrium and efficiency requirements of the national economy, the utilization of fixed and revolving assets must be improved;
- labor productivity must be significantly increased.

Article 9

In order to more vigorously improve efficiency, the production structure must be modernized at a faster rate and with better results than before. The following should be the main trends in reshaping the production structure:

- the elasticity of production, its ability to adapt itself to the changing demands must be further enhanced by market-exploring and organizing work; production must adjust itself to the demands of the foreign and domestic markets;
- the production of modern, good quality economically producible and competitive products must be increased;
- modern and more efficient production methods must be more rapidly introduced and more widely implemented;
- the degree of processing of domestic and imported raw materials from industry and agriculture must be increased economically, domestic sources of raw materials must be utilized rationally and less material-, and energy-intensive developments must be given priority;
- the demand of the population and of the economic organizations and institutions must be more efficiently met with respect to quality and selection.

Article 10

(1) In order to modernize the production structure and to enhance technical development, the accomplishment of the central development programs for the aluminum industry, the petrochemical industry and computer technology must be continued, and the implementation of those regarding pharmaceutical, pesticide and intermediaries production and the electronics industry must get under way.

(2) Programs must be put into effect, which promote more rational energy consumption, the recycling of waste and secondary products, and better utilization of our lumber resources.

Article 11

(1) In technical development priority must be given to those trends which significantly improve the technical standard, quality and economical production of goods, which results in the modernization of technologies, including efficient automatization, and which promote the mass production of prefabricated products, spare parts, components as well as complete industrial technologies and complex systems.

(2) Innovative initiatives must be given more positive support and should be made more explicit use of than before.

(3) Our economic entities' receptiveness and activities regarding the introduction of new products and economical methods aimed at meeting market demands must be improved. The adaptation, domestic application of modern licenses and production methods and their utilization and continuous improvement in production need to be accelerated.

Article 12

In developing the various activities, great care must be exercised to ensure that the operations associated with them are developed, and that the needs brought on by other branches are explored and met.

Standard of Living

Article 13

(1) In addition to the need to preserve and strengthen the standard of living which we attained, greater attention must be paid to the improvement of the qualitative elements of the standard of living.

(2) There should be a 6 to 7 percent increase in the real income per capita.

(3) In order to improve the conditions of living, the following tasks should be stressed during the plan period:

- the increase in wages reflecting the efficiency of work must be such, so that on the average the level of real wages may remain constant;
- the real value of specific basic social allocations must be preserved;
- housing conditions must be further improved;
- special emphasis must be given to the improvement of health services and the primary school network;
- the living conditions of those who for various reasons are at a disadvantage must be improved;
- the supply of goods and services must be of good quality;
- the 5-day work week must be adopted.

Investments

Article 14

(1) 1020 to 1040 billion forints may be expended for investment purposes in the socialist sector. At the beginning of the plan period investments should at first decrease, then gradually increase.

(2) The ratio between productive and non-productive investments should be similar to that in the previous plan period. Within the productive investments those developments should be given emphasis, which increase profitable exports, effectively reduce imports and result in material and energy savings. The greater portion of the non-productive investments should promote the improvement of residence construction and health services, and the primary school network.

(3) Investment resources must be utilized more efficiently than before. Taking into consideration the requirements of savings, the economic and technical preparation of investments must be improved, their realization must be rendered better organized, their implementation must be accelerated and the new capacities must be efficiently utilized as soon as possible.

(4) Equally important with new development is the task of improving the protection, maintenance and renovation of the stock of fixed assets, and accelerating its modernization and expansion--aimed at increasing capacity--which can be economical if carried out together with renovation.

Chapter II

Industry and Construction

Main Tasks of Industry

Article 15

(1) Industrial production should meet domestic demand more efficiently, and contribute more and more to the improvement of the country's foreign economic equilibrium situation. In industrial production the ratio of exports should significantly increase, and the balance between the export and import of industrial products become more favorable.

(2) The structure and product composition of industrial production must be better adjusted to the requirements of savings and to market demands. In industry those activities should develop, which promote a profitable growth of exports and which enhance the growth of the national income, in other words, those which are less material and energy intensive.

(3) In industry, the improvement of efficiency must be supported by raising the standard of management, by rapidly transforming the product structure, by improving the quality of basic materials, by expanding the production of high technical quality spare parts, components and semi-finished goods, by modernizing the technological processes of production and transportation and by speeding up the elimination of obsolete fixed assets.

(4) In order to help the growth of efficient and competitive production, production which cannot be rendered profitable, must be discontinued if the needs can be met profitably from other sources. The capacities and the labor force thus released must be put to more economical use.

(5) Within the economic organizations of industry, there should be an improvement in planning, organizational and management activities. The guidance apparatus needs to be rendered more rational, reduced if possible, while at the same time expertise, management qualities, operations and receptiveness to changes must be improved. The knowledge of market conditions and their utilization in enterprise operations should be given greater weight in the work of enterprise management than before.

Article 16

(1) In five years, industrial production should increase by 19 to 22 percent, however, its contribution to the national income should increase at a faster rate. The expansion of production must be attained by improving the productivity of labor.

(2) The systematic search for, and exploration of our domestic mineral wealth must be continued and, depending on the changing needs and the profitability of the find, preparations for mining must also start, simultaneously.

(3) In the basic-material producing branches the main task is to complete those developments which are already in progress, and to produce more and more valuable products, using the available capacities. Basic material production must supply the processing industry with materials of proper quality, and it must improve its own efficiency.

(4) In the processing industrial branches, the modernization of the production structure, developments and efforts aimed at producing better quality products are subordinated to the requirements of profitable equilibrium improvement. A more favorable ratio than before must be achieved between the production of semi-finished products, spare parts and components, and the development of finished product manufacturing.

Article 17

(1) The amount of investment earmarked for industrial development is 355 to 370 billion forints.

(2) Only the most essential energy and basic material-related investments may be carried out by way of state-level developments. In the other areas of industry—mainly in the processing industry—production development, the transformation of the product structure and the improvement of its competitiveness should be achieved primarily by modernization and reconstruction of existing facilities on the enterprise level. In the development of the processing industry, the ratio of state decisions and subsidies should decrease. State credits and basic allocations may be given to enterprise investments if they meet the conditions of efficiency.

Energy Production and Supply

Article 18

(1) The main task of energy utilization management is to reduce the rate of increase in the demand for energy sources as well as to meet those demands.

A comprehensive energy utilization management program must be put into effect to reduce energy dependence, within a broad sphere of economic and social life. More efficient and economical energy utilization must be encouraged through preferential credits, state subsidies and government measures.

(2) Compared to the previous plan period, increases in fuel consumption must be more moderate, not to exceed 10 to 11 percent. By starting to turn to the use of nuclear energy, and by utilizing domestic coal, a decrease must be achieved in the percentage of hydrocarbons within the energy-production and -utilization structure, from 63 to 64 percent in 1980, to 56 to 60 percent by 1985.

(3) Through the best possible utilization of our existing mining capacities, and with the introduction of two modern, new coal mines, coal production must reach 25 to 26 million tons by 1985.

(4) By maintaining the present level of hydrocarbon exploration, and by improving its efficiency, the level of domestic petroleum production already attained must be maintained, and natural gas production must be increased. Among petroleum products, emphasis must be placed on the extraction of the more valuable fuels, by improving the refining technologies. By 1985, the use of 11 billion m³ natural gas should be expected. Domestic gases of less heating value should be used to fuel power plants. In expanding gas supplies, gas service to residences should be broadened primarily.

(5) By 1985, total electricity consumption must not exceed 38 billion kWh (kilowatt hours). To make this possible, all machine units belonging to the first reactor unit of the Paks Nuclear Power Plant must be placed into operation within the guidelines of the power plant development program, and electricity imports should reach 10 to 11 billion kWh.

Ferrous Metallurgy

Article 19

(1) Production of crude steel and rolled steel must be increased to 4.3 to 4.5 million tons, and 3.4 to 3.6 million tons, respectively. In order to meet domestic needs better, to establish a more economical product structure, and to improve export selection, the manufacture of higher value rolled steel products and secondary metallurgical products should be increased primarily.

(2) By the middle of the plan period, construction of the combined-technology steelworks of the Lenin Metallurgical Works, and of the converter-steelworks of the Danube Iron Works must be finished, and by the end of the plan period, the coking block of the latter must also be completed.

Aluminum Industry

Article 20

(1) In order to accomplish the long-term development goals for metallurgy, geological studies of the bauxite must continue. The timing of the opening of new mines must ensure that the bauxite needs of alumina production may continue to be met.

(2) Construction of the Szekesfeharvar Light-Metal Works already in progress, must be completed. Subsequently, it must be ensured that the aluminum ingot is exported in an increasingly more processed form. As a continuation of the development of semi-finished product manufacture, the increased purification and greater preparation of products must be attained.

Chemical Industry

Article 21

(1) Development of the chemical industry must be more rapid than the average in industry as a whole.

(2) The development of the production and processing of basic materials for plastics must continue within the guidelines of the central petrochemical development program, so that an increasing percentage of the available domestically produced PVC [poly (vinyl chloride)] -powder and polypropylene can be utilized in the form of finished products.

(3) Pharmaceutical-, pesticide- and intermediaries-production must be developed within the guidelines of the central development program, primarily in order to enhance the dynamic expansion of exports. In the pharmaceutical industry, efforts must be aimed at the attainment of efficiently increased exportability, the intensification and modernization of plants and the concerted development of research and foreign market operations. The development of pesticide production must be based increasingly on domestic intermediary products.

Construction Materials Industry

Article 22

(1) The principle task of the construction materials industry is to meet, both quantitatively and qualitatively, the needs of the construction industry and the population. Production must be accomplished primarily through the utilization of efficient and energy-saving capacities created by existing, that is, presently continuing developments.

(2) Production of wall materials, reinforced concrete structures and heat insulators must be expanded in accordance with the needs of the population. The glass and refined ceramics industry must meet the growing demands of industry and the population, and must increase its profitably exports.

Machine Industry

Article 23

(1) The rate of development in the machine industry must exceed the average in industry as a whole.

(2) In the development of the machine industry, the most important task is to help improve the economic balance and supply the national economy with modern machines in the long run as well, primarily by increasing profitable exports and, in addition, by replacing uneconomical imports. It is in accordance with these goals that the production and marketing structure of the machine industry must be modernized.

(3) The manufacturing of those products which contribute the most efficiency to the improvement of the foreign economic equilibrium, to the raising of the technical level of the national economy and the meeting of popular demands for consumer goods, should be developed vigorously.

(4) Special attention must be given to the production of spare parts, components, prefabricated elements; certain electronics products, food-industrial and agricultural machines and machine systems; certain equipments used in the production, distribution and utilization of electricity; certain public-road vehicles and component units; modern computers and durable goods.

(5) Export of complete industrial technologies and complete production-service systems should be increased.

Light Industry

Article 24

(1) The product composition of the garment industry must be modernized by more elastically adjusting to demands. The percentage of economically producible, fashionable high-quality products made of modern materials must be significantly increased. In the course of modernizing the product structure, the latest conditions of domestic and foreign market turnover must also be established.

(2) The production of household textiles, dry goods and finished garments must be increased. The composition of woven garment products must be better adjusted to the requirements of profitability.

(3) Modernization of the paper industry's product structure must be continued. Emphasis should be given primarily to expanding the production of good quality paper-types and processed paper products. Production of combined and matched packaging materials must also increase. Collection and recycling of paper wastes must be accelerated.

(4) In order to expand the utilization of our domestic lumber wealth, production of the wood-processing industry must improve the quality and selection of its products which meet internal and external demands, and are economically producible.

Food Industry

Article 25

(1) The food industry should meet the demands of the population and increase exports by improving their profitability. The assortment of products must adjust to the changing requirements of the internal and external markets; competitiveness of the products must be improved, and the standard of their packaging and transportation must be raised.

(3) The main directions of development in the food industry are: reconstruction, and technological modernization and expansion which promote better utilization of the existing capacities. Priority must be given to investments and developments aimed at enhancing the international competitiveness of food industrial products, their profitable external marketing and the more complete utilization of agricultural raw materials.

Construction Industry

Article 26

(1) Nationwide construction and assembly activities should expand by 11 to 14 percent. The percentage of maintenance-type construction must increase.

(2) The sphere of activity, organizational order and production management of construction industry organizations must be developed in a manner which permits them to adjust their capacities to the changing composition of construction demands, allowing construction activity to become more elastic in scope and in professional preparedness, and strengthens enterprenurial attitudes.

(3) Construction industry organizations must offer better quality in meeting construction demands than before, while at the same time continuing to reduce the time needed for implementation. To ensure that the construction tasks of capital investments, and the maintenance and renovation projects aimed at preserving the existing stock of edifices, are accomplished efficiently and on time, capacities must be properly utilized. Increasing attention must be paid to housing construction in Budapest, to the building of housing-related projects and to reducing the growth of the expenditures connected with them.

(4) Efficient construction industry exports--primarily those connected with the export of industrial technologies--must be increased. Further modernization of the construction industry must not add to the growth of construction costs stemming from technological reasons.

(5) In the construction industry, labor productivity must increase at a faster rate than production.

(6) The technical planning organs must plan the edifices expediantly, and with rational savings in mind, aimed at keeping total investment and operation costs to a minimum. In order to efficiently fulfill the tasks of the construction industry, to help employ fast and economical solutions, and to better utilize the existing capacities, cooperation among those who take part in the investment process must be better organized, and great care must be taken to ensure that their responsibilities are properly carried out.

Chapter III

Agriculture and Forestry

Main Tasks of Agriculture

Article 27

- (1) In addition to striving for a better balance and quality in meeting consumer demands, agricultural production and its structure must develop on the basis of the demand and efficiency requirements of the foreign economy. By elastically adjusting to the constant foreign market conditions, by improving economy and through the sale of agricultural products and food stuffs, the net foreign exchange intake must be significantly increased.
- (2) During the plan period, production of agricultural goods should increase by 12 to 15 percent compared to the preceding plan period. This must be achieved by better utilization of the existing resources, more economical management, and by a profitable increase in yields per unit of land as well as in the productivity of the animal stock. The contribution of agriculture to the growth of the national income should increase at a rate closer to the rate of production than before.
- (3) Better care must be exercised than before to ensure that the productivity of the soil is maintained, systematically ameliorated and efficiently protected. The reduction in the size of areas under agricultural use, especially of arable land, must be curbed.
- (4) Increase in agricultural production must be achieved primarily through the effective development of large-scale production. Existing productive capacities must be better utilized than before, and the spreading of efficient, modern production and plant-organization methods must be enhanced. Cooperation among large-scale agricultural establishments should broaden, the activities of agricultural cooperatives, state farms, general consumer and marketing cooperatives and other concerned economic organizations aimed at integrating small-scale agricultural production, must intensify.
- (5) State farms and agricultural cooperatives with favorable natural and operating conditions must continue to have a direct interest in increasing the quantity, quality and efficiency of production. Farms operating under average conditions must be given greater incentives than before to explore and mobilize their reserves. Agricultural establishments operating under unfavorable natural conditions must be given state subsidies to assist them in creating an economical production structure which is better adapted to the conditions of a given area, as well as in developing their auxiliary operations.
- (6) The auxiliary operations of the large scale agricultural establishments, as well as the production and servicing associations established by them, must increasingly contribute to supplying the industrial enterprises with products, and to more efficiently meeting the demands of the population both with respect to the supply of goods, and in the area of services.
- (7) Assistance must continue to be given to the various strata of the population to promote their agricultural production, especially in hog-, poultry- and small-animal breeding. The achievements attained in vegetable-, and fruit-growing must be consolidated. The supply of labor-saving capital equipment to small-scale agricultural establishments should improve, and income earned by work should receive proper social recognition.

Article 28

(1) An investment fund of 128 to 135 billion forints will serve agricultural development.

(2) Improvement of efficiency should be promoted by better utilization of the existing equipment stock, by complex mechanization of the production processes and by introducing and spreading energy-saving technologies. The technical basis of agriculture must be further modernized, the conditions of plant and work organization and the operation of the machinery must be improved.

(3) Accomplishment of the production tasks must also be assisted by way of state subsidies for investments. The most important agricultural constructions must be supported through the granting of preferential credits as well.

(4) The use of synthetic fertilizers and pesticides must be continuously expanded to lay the foundation for an increase of yields in plant production. Greater attention should be given to the various uses of organic fertilizers and of agricultural by-products, wastes and feed protein, as well as to the creation of the economic conditions necessary to accomplish these. In order to improve efficiency and to protect the natural environment, chemical materials must reach the agricultural areas economically and by means of the application of proper techniques and technologies.

Plant Production

Article 29

(1) By the end of the plan period, grain production should reach 14.7 to 15.7 million tons; it should be sufficient to meet the country's needs for bread and feed grain, and should also permit increasing exportation. Over the five years, the average wheat production should reach 4500 to 4800 kg, and the average maize production should reach 5500 to 5700 kg per hectare. To reduce losses, storage capacities must be increased giving preference to energy-saving storage-methods.

(2) In order to meet domestic needs—especially to insure an ample supply of fresh vegetables—and to expand profitable exports, yields must be increased and profitability must be improved. Efforts should be directed at creating a production structure geared toward meeting demands, and at satisfying quality requirements. In addition to the modernization of plantations, 14 to 16 thousand hectares of grapes, and 24 to 26 thousand hectares of fruit plantings should be introduced in an assortment of species and types which meet existing needs.

(3) The green and rough feed demands of animal breeding should be met by employing a smaller sowing area of arable land for that purpose, while significantly increasing product yield. The utilization of meadows and grazing lands must become more effective. A greater proportion of the byproducts of plant growing should be utilized as animal feed.

Animal Breeding

Article 30

(1) Slaughter-animal production should be further expanded for both domestic and export purposes; milk and egg production should be further increased to meet internal demands.

(2) In cattle breeding, money-saving meat production based on bulk feed should be increased. The less capital and labor intensive cattle-for-beef keeping should increase. Increase in milk production should be achieved by increasing the milk yield per cow.

(3) Production of slaughter pigs in the large-scale establishments should be increased by better utilization, reconstruction and expansion of already existing accommodation facilities, by improving the conditions of maintenance and feeding and by cutting losses. Great care must continue to be given to provide the necessary conditions for the uninterrupted continuation of small-scale hog-keeping.

(4) Development of the sheep stock should be aimed primarily at increasing meat production. Production of slaughter poultry and other small animals should enhance the expansion of profitable exports.

Forestry Operations

Article 30

(1) In order to better utilize our domestic resources, to more completely meet domestic demands for timber, to promote replacement of imports and to increase profitable imports—and by broadening cooperation among the organizations involved in forestry operations—timber production and the economically usable percentage of the produced timber must be increased. Primary timber processing must be developed by expanding the available basic material base, and also in harmony with domestic consumer demands and export possibilities.

(2) In order to promote the growth of new timber, to meet long-term timber demands and to better utilize the soil, forest plantation and the transformation of the forest structure must be continued.

(3) The technical modernization of forestry operations and the mechanization of hard physical labor must be further continued in a way which improves the harmony of the mechanization of work processes and enhances the utilization of capacities.

Chapter IV

Water Management

Article 32

(1) Provisions of water utilities to the population in the capital city must be developed in the high-priority settlements and in those with unsanitary water. By the end of the plan period, about 60 percent of the residences should have a water supply through pipes. The drain system must be developed in such a manner that by 1985, 35 to 37 percent of the expanding stock of residences can be supplied through the public drain system.

(2) Due to the increasing use of the water resources and to the danger of their contamination, safe water provisions must be provided for by developing regional water-producing and water-supplying systems. Contamination of the water resources must be reduced by improving the public utility wastewater-treatment facilities. In order to stop further pollution of the water resources and, in certain areas, to reduce still existing pollution, the wastewater-treatment capacities of settlements must be increased. The harmony between water supply and drainage on the one hand, and wastewater sewage and treatment on the other, must improve.

(3) In order to prevent and avert floods and overflows of inland waters, to insure the security of the life and property of the population, and to safeguard the growing national wealth, expansion and strengthening of the protective facilities, and modernization of the means of protection should continue. Water regulation should be accomplished in harmony with the soil-upgrading efforts of agriculture. In order to protect the building stock of settlements, the regulation of internal waters must be improved. Continued attention must be paid to the improvement of the water quality of Lake Balaton.

Chapter V

Transportation and Communications

Article 33

Needs for transportation and communications, which are growing at a slower rate than before, resulting from social and economic developments and expanding international relations, must be met by increasing reliability and maintaining the already achieved standard of quality, by way of improving productivity, energy conservation, the utilization of equipment, and perfecting plant and work organization. During the next five years, production must be increased by 8 to 9 percent in mass transportation, 12 to 14 percent in goods shipment and 18 to 20 percent in communications.

Article 34

(1) A total of 128 to 138 billion forints will have to be expended for the development of transportation and communications, and 52 to 54 billion forints for the modernization and maintenance of the public road network.

(2) In the course of developments, priority must be given to the reconstruction of the transportation--especially the railway--and communications networks.

(3) The following are the primary tasks:

- In mass transportation: development of local and peripheral transportation.
- In goods shipment: increasing the capacities of—from the point of view of efficiency and fuel economy—more favorable, railway transportation.
- Development of the mass media.
- Increased traffic safety and operating readiness of communications facilities.

Shipping

Article 35

(1) In order to better utilize the capacities of railway transportation and the stock of vehicles, emphasis must be given to the reconstruction of high-traffic lines, overfraught stations switchyards and nodal points; their mechanical condition must be improved, their traffic-handling capacity must be increased; newer tracks must be electrified and traffic control must be automatized. In order to finally eliminate locomotive hauling by 1985, modern, primarily electric-motive hauling should be stressed. The passenger and freight rolling stock—while replacing the cars eliminated out of necessity—should accomplish its shipping tasks without increasing in size, and by improved utilization of its capacities.

(2) To compensate for a more moderate development in public-road shipping, the division of labor in the shipping field must be further modernized by better organized employment and better utilization of trucks—especially of the public vehicle stock—by further development of pipeline transportation, and by making better use of the transport capacities of waterway shipping. The efficiency of the shipping process must be increased by expanding the use of modern modes of shipping—including container shipping—and by improving cooperation between the branches of transportation—especially between railway and public-road shipping—and the shippers.

(3) With respect to the national and council public road network, the resources should be concentrated on the modernization of roads—as warranted by the traffic moving over them—specifically, on the widening of payments as needed, and on the reinforcement and maintenance of autoroutes. The construction of autoroutes must continue. Increasing attention must be paid to the capacity-expanding modernization of sections of the public roads leading to the capital city and through settlements. In order to improve the safety of public road traffic, public road intersections and public road-railway crossings must be designed in a manner which reduced the accident hazard.

(4) Mass transportation should be further developed, especially in the capital city and the five large provincial cities and also in and around their suburban areas. The construction of the subway in Budapest should continue. During the plan period, two new sections should be put into service on the North-South line. The Arpad Bridge must be widened together with the construction of the subway. In the capital city and in some large provincial towns, assistance must be given to the modernization of public streetcar transportation and the expansion of the trolley-bus network. In the other cities, but transportation will continue to be the main instrument in modernizing and developing mass transportation.

(5) Demands for the development of inter-city bus transportation must be met—aside from completing the necessary replacement of defective units—by better utilization of the vehicle stock, including public buses, and by paying special attention to making worker transportation increasingly more civilized. Reconstruction of the passenger vessel fleet, the development of the Ferihegy Airport and of the aviation-traffic control system must continue.

Communications

Article 36

(1) The reception possibilities of radio and TV transmissions must be further expanded and improved. In order to accomplish this, one of the main tasks is to modernize those radio transmitters which broadcast the programs of Radio Petofi. Construction of the domestic connections and facilities of the joint communications system among the member countries of the CEMA must be continued on the level of the preceding five years.

(2) In the other areas of communications—primarily in telephone communications—the basic task is to continue the reconstruction of the communications networks. As a result of the expansions in telephone services, combined with reconstruction, the number of stations providing direct service to the population must be increased from 400 thousand, to 450 to 470 thousand. Expansion of the long-distance telephone system should continue.

Chapter VI

Internal Trade and Tourism

Internal Trade

Article 37

(1) The goods volume of internal trade must be increased according to the demands.

(2) In order to improve shopping conditions, the retail network must be developed in harmony with the volume of trade. The quality and cultural level of sales work should improve. The profitability of trade and better supply of goods to the population must be further assisted by modernization of the existing organizations and by the spreading of new operational models.

(3) Catering must become better adjusted to demands. Growing demands for work canteens—primarily for children-feeding operations—must be better met; the quality standard of the hostelry trade must be improved.

(4) By forecasting demands more accurately, and by improving the cooperation between production and trade, we must help to ensure that the travelling distance of goods is shortened, and that the national economic efficiency of the volume of trade is increased. The production organizing, and at times direct production activities of trade must be expanded. In order to improve warehousing, lasting cooperation among enterprises involved in the trading, production and utilization of capital equipment—based on agreements—must become more widespread.

(5) A more rapid increase than before in the rate of development of trade activities connected with production is well justified. The waste-collection network, and the preparation of wastes for industrial use must be developed in such a way, so that it better assists the by-product and waste collecting trade and enhances environmental protection.

(6) In the wholesale trade of agricultural products, priority must be given to solutions which help strengthen the ties between production, internal marketing and export activities.

Tourism

Article 38

(1) In order to meet the touristic demands of the population, touristic services must be expanded, in harmony with the changing living conditions, and the conditions of guest accommodations must be improved. The development of group and youth tourism must be enhanced.

(2) An expansion of the conditions of tourist accommodations for our international tourism is justified if profitability considerations are taken into account. Priority must be given to the development of organized tourism. Our goal is to extend the time spent here by foreign tourists and also, to increase their purchases of goods and services per day.

(3) Expansion of high-priority resort areas should continue, taking into account the demands of internal tourism, and funded by central, enterprise and local resources. Utilization of our thermal-, and healing waters for tourism must be intensified. The conditions of forest recreation and tourism must be improved in harmony with the available resources.

Chapter VII

International Economic Cooperation and Foreign Trade

Article 39

(1) By increasing our participation in the international division of labor, we must help to ensure that foreign trade goods traffic increases at a faster rate than the national income. This is further enhanced by the establishment and development of higher level forms of the division of labor and by an expansion of direct production-related ties between domestic and foreign enterprises.

(2) International financial relations must be broadened. International credit operations must be used to speed up the modernization of the economy and to improve its competitiveness.

Article 40

(1) Our cooperation with the Soviet Union and the other member countries of the Council of Economic Mutual Assistance must continue to remain the deciding factor of our international economic relations. Socialist economic cooperation must be

developed by systematic exploration and the fullest possible utilization of the possibilities. We must strive for widening our bi-, and multilateral collaborations and especially for broadening our cooperational relations. This must be established primarily by meeting our obligations undertaken in a variety of agreements based on the principle of reciprocity.

(2) During the plan period, we must take further initiatives to enhance the accelerated progress of integration within the Council of Economic Mutual Assistance. Together with the implementation of the plan, we must participate in the exploration of more efficient forms of cooperation, as well as in the fulfilment of those contractual obligations which are laid down in bi-, or multilateral agreements.

(3) We must actively participate in the activities of the joint economic organization of the member countries of the Council of Economic Mutual Assistance, to enhance the exploration of more efficient forms of cooperation, and to strengthen the direct ties among the producing and utilizing enterprises and research institutions of the member countries. We must promote the expansion of lasting technical and production ties.

Article 41

(1) We must develop our mutually advantageous economic, including trade relations with the developed capitalist countries. These ties should serve more and more the effective further development of the production structure and the raising of our economy's technical standard.

(2) Our existing economic relations with the developing countries must be further developed, in harmony with our economic and political interests. We must strive to broaden our cooperation both in production and development.

Article 42

(1) The goods volume in foreign trade should increase by 25 to 30 percent, and within it, exports should grow at a significantly faster rate than imports. The efficiency of foreign trade must be improved.

(2) By increasing the volume of exports--through the exporting of modern, better quality, more valuable and new products, and through improving shipping conditions--their efficiency must be improved, and the returns of foreign exchange resulting from them must be increased. The forms of marketing must be improved.

(3) In imports, we must ensure that we procure base and raw materials, semi-finished products, technologically modern machinery and equipment and consumer articles, which serve and improve the supply of goods to our population. Great attention must be given to rational import savings and to reducing the import demands of production and utilization.

Chapter VIII

Living Conditions of the Population

Employment

Article 43

(1) The main goal of our employment policy—in addition to the maintenance of full employment—is to vigorously improve the efficiency of human labor, and to improve the balance of employment. These goals must be accomplished primarily by establishing the conditions necessary for personal interestedness and for economic operations, by modernizing the organization of work and by raising the standard of management, which promotes more rational manpower management.

(2) In order to significantly improve labor productivity, the number of people employed in industry and in construction must be reduced, while the number of those working in the area of education, health care, trade and services should increase.

(3) We must make it possible for manpower which cannot be effectively utilized in economic organizations and institutions, to be employed elsewhere. In addition to establishing the proper economic conditions, manpower-management measures must also be introduced to improve the mobility of the work force. Conditions for the effective employment of young people entering the work force and of the manpower released must be created, and the conditions for the employment of the handicapped must be improved.

(4) During the first half of the plan period, we must, by making better use of the working time, switch over to the five-day work week—together, in general, with a slight decrease in the present length of the basic work shift—among those living on wages and income.

Personal Income

Article 44

(1) The real income of those employed as laborer and those working in agricultural cooperatives must be kept at its average 1980 level.

(2) A greater percentage of the increase in wages should materialize based on the system of economic regulators within the economic organizations, by taking into account the economic achievements attained, and in a manner which is centrally determined by our financial institutions.

(3) The earnings of workers should be in better harmony with the quantity, quality, the conditions and the achievements of the work accomplished. Greater recognition must be given to creative and quality white-, and blue-collar work. Differences in earnings among the workers should increase primarily within specific job areas, and depending on efficiency, they should also manifest themselves among the collectives.

(4) The amount of financial social grants should be increased in such a manner as to increase the lowest and maintain the real value of pensions, presently below average, and family bonuses to families with three or more children. The amount of other authorized family bonuses, child-care support and social grants must also be increased.

(5) The living conditions of those who for different reasons may be considered as living at a disadvantage, must be improved as possibilities permit. In addition to increasing and more effectively utilizing local aids and other state measures, the social forces and the families must also be involved in helping to alleviate the unfavorable situation of these strata.

(6) Grants-in-kind should increase in harmony with the expansion of the institutional network--by way of increased efforts in meeting the requirements of rationality and savings--and at a faster rate than total income.

Consumption and Supply of Goods and Services to the Population

Article 45

(1) With respect to improving the living conditions, special care must be exercised to ensure that the supply of goods and services is of high standard, that they adjust to demands and that unjustified regional differences are reduced. The development of rational, socially and economically favorable phenomena which arise as a result of the improvement and transformation of consumption must be enhanced.

(2) The supply of goods should ensure healthier food consumption, that is, growing consumption of foods of animal origin and of high vitamin content. The selection of processed and housework-savings foods and the public catering operations of the hostelry industry must be expanded.

(3) The price and quality selection of wearing apparel should contribute toward the development of clothing culture and should make it possible to better meet the varied demands.

(4) By further intensifying the international division of labor, by proper utilization of the possibilities of imports, by strengthening the production organizing role of trade, and by promoting rational competition, efforts must be made to improve the supply of industrial goods. The fulfilment of the housing construction program should be enhanced by way of steady construction material sales.

(5) The supply of durable goods sought after by a broad spectrum of society, as well as the selection of tools, appliances and materials must be expanded, and their quality must be improved. The achievements of technical development should manifest themselves in the supply of the above products.

(6) The standard of services needs to be improved in every phase of the process, from the undertaking to the fulfilment of tasks. To accomplish this, the suppliers of services must be given a greater stake in doing their work in a reliable, good-quality, fast and punctual manner. The elastic meeting of the demands of the population, and the development of competition for consumers must be enhanced, furthermore, by modernization of the organizational forms. Expansion of the service activities of handicrafts which elastically adjust to demands and which operate within organized guidelines, must be promoted. The independent repair and maintenance work of the population must be assisted through better product availability.

(7) The protection of consumer interests with respect to the quality and reliability of products, and the fulfilment of the terms of undertaken services must be ensured.

Availability of Residences

Article 46

(1) During the plan period, the availability of residences must be improved by construction of new residential units, increased renovation of the existing housing stock, and by modernization of the conditions of apartment exchanges and of the organization of real estate trade. A program must be prepared for the fulfilment of tasks.

(2) 370 to 390 thousand new residential units must be constructed, more than two thirds of them in the cities and in urbanizing areas.

(3) By way of economical cost management, 115 to 120 thousand residential units must be built from state funds.

(4) State apartments must be constructed equipped with facilities at the present level, increasing the ratio of those types of units which meet demands in a differentiated manner. In the allocation of apartments, the councils must systematically take into account the socio-political considerations.

(5) A considerable portion of the new residential units must be built with the bringing in of private funds. The construction of private residential units in the form of modern, multilevel and collective settlement family residences should be promoted by way of long-term construction loans, expanded socio-political support, and by providing lots supplied with public utilities.

(6) During the plan period, 90 to 100 thousand council apartments must be renovated, and 40 to 50 thousand residential units must be modernized.

(7) Together with improving the residence supply, the community services of the settlements must be improved primarily in the capital city and in the provincial cities. Institutions supplying basic services must be built together with the construction of residential settlements. Participation by the public in the maintenance of public sanitation must be promoted.

Education and Cultural Services

Article 47

(1) To cope with the large increase in the size of primary-school age groups, 5500 to 6000 classrooms must be built, the majority of these in the form of new schools. In addition to development, the proportion of primary-level education using the shift method should be decreased also by way of organizational measures. The unjustified regional and intra-settlement differences which exist with respect to the material and personnel conditions in the area of primary education must be gradually reduced, while raising the standard; day-care services must be expanded. A program must be created for the development of primary school education.

(2) To improve kindergarten services, 30 to 35 thousand new spaces need to be created. By this measure, we must strive to meet almost completely the demands for accommodations by the end of the period.

(3) Special-education services must be improved by the adding of new classrooms and institutional spaces.

(4) In secondary education, the proportion of continuing students must be decided by taking into account the needs of society. In addition to increasing the average size of classes, and to more efficiently utilizing the existing institutions, the meeting of the demands of the growing student body must be accomplished by way of organizational measures as well. The conditions of practical training must be improved; dormitory accommodations must be expanded.

(5) The quality standard of higher education must be raised. Cooperation among higher educational and research institutions must be further developed. The conditions of education must be improved primarily by the renovating of the existing institutions--including the Lorand Eotvos University of Arts and Sciences, and the Karl Marx University of Economic Sciences--and by the building of social establishments for students. The number and skill composition of those receiving an education should be in harmony with the future needs of society and the national economy.

(6) We must contribute to the fulfilment of our public educational tasks and the conditions of physical education and sports, by modernizing our public-educational, art, physical education and youth establishments and sports facilities, and by better utilizing the existing and new institutions. Renovation of the more significant art institutions must continue.

Health and Social Services

Article 48

(1) The principle goal of health and social services is to improve basic- and in-patient care services. By way of developments, by increasing skill levels and the efficiency of patient care, and by strengthening preventive care operations, we must strive to improve the health of the population.

(2) During the plan period, a total of 6500 to 7000 new hospital beds must be established, primarily by way of expanding the existing institution. The composition of the stock of hospital beds must be better adjusted to the therapeutic requirements. The medical-technical capacities of the therapeutic institutions must be expanded; the conditions necessary to insure the operation of the institutions must be improved.

(3) An increase is called for with respect to the possibilities of nursery accommodations--especially in the larger cities and in the residential areas of industrial centers--by way of establishing 9 to 10 thousand new spaces.

(4) Increased care must be given to improving services to the physically and mentally handicapped, and the number of public health child care accommodations for this purpose must be increased.

(5) Social care for the elderly must be improved. We need also to broaden the various forms of care within the family environment, expand day-care center services, social employment and the network of homes for the elderly operating within the residential districts. In five years, 6000 to 6500 new elderly home accommodations must be established. The capacities of nursing homes must be increased, and more pensioner centers must be built.

(6) The conditions of ambulatory-patient care must be increased by raising the standard of therapeutic and preventive care, and by improving equipment and instrument supplies. We must increase the number of pediatric and dental-care districts.

Chapter IX

Regional Development and Environmental Protection

Regional Development

Article 49

(1) Regional development must promote the realization of the goals of the national economic plan, the efficient utilization of regional resources and the reduction of the existing regional differences in supplies to the population.

(2) Industry must develop primarily on the existing regional bases. The number of new capital investments which have regional implications as well, will have to be smaller than before. New production units in the processing industry is called for mainly in small towns and in unfavorable agricultural regions (in Northern Hungary and Southern Trans-Danubia). The selective development of industry in the Budapest agglomeration area must be continued. We must continue--though at a slower rate than before--the discontinuing and relocation of industrial operations and plant locations which are not connected to the capital city and are hindering city development.

(3) The regional structure of agricultural production must be shaped--on the basis of cultivable areas, arable lands--according to the requirements of market demands and efficiency. The production structure of agricultural establishments must be expanded by encouraging the development of auxiliary operations, primarily in agriculturally unfavorable regions. The manpower released from the food-processing industrial and service operations of agricultural establishments, may be employed in industry and construction.

Article 50

(1) The settlement network must be developed more proportionately than before, by promoting better harmony between production and settlement development. Development of the cities must be better in tune with the demands and requirements of the population of auxiliary districts. The reduction of supply differences among settlements of similar and different functions must be continued according to the long-term goals of the settlement network. The gap between the working and living conditions of people living in the cities and in the villages must be narrowed and the population-level maintaining capacity of the villages concerned must be strengthened.

(2) Population migration to the cities should be reduced compared to the previous plan period.

(3) Special emphasis must be given in the capital city to the development of residence allocations, primary-school services; to the upgrading of existing health facilities, and to improving the supply of commercial goods and mass transportation.

(4) In the large cities and towns, emphasis must be mainly on implementing a development policy which improves the fulfilment of the existing quantitative needs of basic services, and the quality of provisions which give preference to primary-school development and the renewal of the institutional network.

(5) The production-, supply-, and cultural ties of settlement groups, agglomerations, towns and their vicinities must be strengthened, and efforts aimed at reducing existing unjustified inequalities in work and living conditions must be more consistent. Part of the large cities' demand for residential units must be met by way of development in the adjacent settlements and service districts, and by improving the conditions of residence construction.

(6) The development of mid-size and small towns must be more vigorously continued, in order to narrow the quality gap in the supply of basic services to the medium and higher-level centers.

(7) In the villages mainly those elements of the basic services should be developed, which increase their population-level maintaining capacities. In one category of villages, in the high-priority lower-level centers and in city-vicinity and agglomerated settlements with important industry, the supply of basic services must be developed in a differentiated and broader manner, and at a faster than average rate. With the help of central measures; by a more favorable allocation of available material resources earmarked for the development of settlements with respect to the villages; by way of financial and other types of subsidies, and through measures urging the involvement of popular resources, we must make the villages more attractive for those who live in them.

(8) Within the categories of villages--including small villages and scattered settlements which will continue to retain their economic tasks--we must strive continuously to make healthy water supplies a reality, to fill vacant district-doctor positions and to improve the conditions of transportation, through increased social collaboration. The supply of basic foods and daily necessities must be improved; the standard of services to the population must be raised.

Environmental Protection

Article 51

(1) The high-priority task of environmental protection is the safeguarding of the water, the air and the soil; the reduction and safe disposal of wastes. The maintenance and refined handling of areas designed to preserve nature must be ensured; we must avert their pollution and prevent them from being used for purposes other than those assigned to them.

(2) The deterioration of the quality of the water supplies must be reduced by introducing a variety of measures designed to accomplish this, and by more rational utilization of the available means. In the high-priority areas of water quality protection, we must promote the building of wastewater-purification facilities. We must ensure that the wastewater and sewage-sludge are skillfully treated and utilized, and furthermore, that they are safely disposed of.

(3) Considerations of soil protection must be given greater weight in the utilization of areas. The reemployment of agricultural areas must also be given aid.

(4) Protection of the quality of air must be provided by way of reducing the emission of waste materials in the heavily polluted areas and in the new establishments, primarily by employing active modes of protection.

(5) The reduction and recycling of wastes, and the disposal and decontamination of dangerous wastes which are harmful to man and the ecology represent an important task. The environment-polluting effect of communal wastes must be reduced, by way of modernizing waste collecting and decontamination operations and by promoting waste recycling.

Article 52

(1) In the Lake Balaton area, we must achieve and improvement in every field of environmental protection, but especially in the protection of the quality of water.

(2) In the Budapest agglomeration, the main task is to improve the quality of the air, to treat and dispose of communal and dangerous wastes with respect for environmental protection, and to improve wastewater purification.

(3) In the larger industrial districts of the country: namely in northern and central Trans-Danubia, in the Sajo Valley and in the Pecs district, the primary goal is to reduce air pollution and to improve the protection of water quality.

Part Two

Article 53

The system of economic management, i.e.: national economic planning, economic regulation, the decision making and organizational system, must promote the realization of the goals laid down in this law.

Chapter X

System of Planning; Specific Decisions of the Plan

Article 54

(1) National economic planning is to be continuously modernized, by taking into account the development of science, utilizing our experiences in planning up to now, and adjusting to the changing conditions.

(2) The exploration and introduction of the possible and desirable directions of economic development by the national economic planning should be more complex. Economic tasks in the plans should be laid down in harmony with the increasingly faster and less predictable changes in economic conditions than before.

Article 55

(1) Specific state decisions must be rendered regarding:

- the accomplishment of central development and other programs between 1981-1985,
- central state investments and state subsidies for certain developmental purposes,
- central measures concerning the standard of living,
- other important measures affecting the utilization of state funds,
- measures improving the efficiency of the economy.

(2) The accomplishment of the goals of the plan must also be promoted by way of international agreements.

(3) Decisions which promote the accomplishment of medium-term goals must be rendered by adjusting to the direct and real conditions of development.

Chapter XI

The System of Economic Regulators

General Guidelines of Regulation

(1) The economic regulators must promote the realization of the economic-political goals and tasks laid down in this plan. The economic regulators must be established in such a manner that they properly transmit to the economic entities the economic-political goals and social interests promulgated in the plans, so that they may, as a whole, enhance the planned improvement of the equilibrium conditions, namely the realization of the envisaged growth, the principle ratios and the directions of development.

(2) The economic regulators must more effectively than before induce and compel the economic organizations to render their production more competitive by international standards, that is, to improve its efficiency and develop its production structure; to carry on efficient technical development; and to operate independently and responsibly, rapidly adjusting to the changing conditions. This effect is to be achieved primarily by bringing domestic prices closer to world market prices; by income regulations based on uniform principles; increasing personal income on the basis of accomplishments and depending on economic results; and by adjusting the possibilities of development to the criteria of efficiency.

(3) With the help of the economic regulators, real differences in efficiency--measured by world standard--must be brought to light within a constantly broadening sphere of the economy, and the possibilities of development and the growth of

personal incomes must be differentiated. We must pay increased attention to making certain that the development of economic organizations capable of profitably and dynamically expanding their production is speeded up, and that the production of unfavorably operating enterprises is rendered efficient.

(4) If changes in the conditions, the actual shaping of economic development and the experiences of the economic regulatory system so require, certain elements of the system of regulators or their dimensions must be modified in the course of the plan period. Specific modifications must be carried out in ways which, in general, do not undermine interests in useful undertakings and long-term economic activities.

Price Policy and Price System Development Guidelines

Article 57

(1) In the area of price policy, the guidelines regarding the price system and the price mechanism presently in force are to be systematically implemented. Domestic producer prices of basic materials and energy sources must develop according to the price ratios of the world market. Domestic prices in the processing industry should be increasingly adjusted to foreign trade export prices. The price system should become more homogenous. The price mechanism should make it possible for periodic foreign-market price changes to manifest themselves in the domestic prices as well.

(2) Increases in producers and consumer prices must be kept within systematically regulated guidelines. Price-political means, including both price-level setting and state budgetary policies must be used together to influence price-level trends.

(3) In order to enhance the development of an economical consumption structure and to promote savings, consumer prices must be more elastic in adjusting to producers and import prices. Consumer-price supports must be gradually reduced, and in the future they must be reserved only for aiding specific products and services, and in socio-politically justifiable proportions.

Financial Policy and Income Regulation Guidelines

Article 58

(1) The primary task of the financial policy is to improve the equilibrium of the national economy; to develop competitive operations and economical cost management.

(2) Financial measures should contribute to the growth of net income and promote the realization of income utilization ratios which are in line with the goals of the plan.

(3) Enterprise income regulations should continue to promote profit incentives, by systematically implementing the guidelines of the price mechanism.

(4) By gradually expanding financial regulations based on uniform guidelines, we must also ensure that incomes originating in the various economic entities are in increasingly better harmony with the efficiency of their operations.

(5) In order to protect the value of the forint and to put foreign trade operations on the right track, we must pursue an active price-level setting policy.

(6) As a result of financial regulation, the purchasing power of investments should develop in such a way so that it permits the enterprises to develop efficient production in a dynamic manner, and to speed up the modernization of their production structure.

(7) Financial regulation--together with the other instruments of guidance--must contribute to the elimination of uneconomical operations, and to the reallocation of the capacities thus released to economical operations.

Article 59

(1) State budgetary policy serves the balanced development of the national economy. Budgetary earnings should increase at a faster rate than spending.

(2) We must pursue tax-, and subsidy policies which facilitate the improvement of the budgetary equilibrium. Temporary special subsidies and concessions granted for production purposes must cease by the end of the plan period.

(3) Strict and rational savings must be achieved in all areas of budgetary expenditures for consumption and stockpiling. In order to establish the foundations for savings-conscious economic operations, the ministries, the capital city and county councils must prepare medium-term financial plans.

(4) Total social public expenditures may only moderately increase, and the rate of this increase must vary according to the social significance of the task. We must strive for a reorganization of our financial instruments which gives preference to those areas which are of the greatest socio-political interest.

(5) By maintaining the profit-incentive of economic organizations, while at the same time preserving the homogeneity of income regulation, we must continually see to it that the concentration of income necessary for fulfilling the budgetary tasks decided upon by paying maximum attention to savings, is ensured.

Article

(1) The financing sources of stockpiling should be organized in a structure which makes the realization of the economic-political goals possible. Financial regulations should assist in increasing the effectiveness of stockpiling.

(2) State financing of investments should be aimed primarily at the development of the infrastructure. The role of state grants and credits should relatively decrease in the financing of productive investments.

(3) Major central productive investments should be made generally in the form of fully repayable state loans, and using additional resources from own-development funds.

(4) The financial sources of investments decided upon by enterprises are: the development fund, supplementary bank loans and basic state allocations generally given in the form of credits. State subsidies may only be granted for defined purposes.

Credit Policy Guidelines

Article 61

(1) The aim of our credit policy is to serve the strengthening of the national economic balance and the systematic improvement of the purchasing power. In order to improve efficiency and to transform the production structure, we must reemphasize the selective nature and the purchasing power regulatory tasks of our credit policy.

(2) The sources necessary for credit allocations should be provided through an accumulation of deposits by the population and by economic entities, as well as through foreign credit operations.

(3) Credit should be granted primarily for investments directed at the economical transformation of the product structure; the improvement of profitability, and within it, increasingly at expanding profitable exports; the rational and economical replacement of costly imports, and at investments aimed at reducing energy demands. In the granting of credits, we must strengthen competition based on the profitability of development.

(4) Permanent increases in the revolving funds must be financed by the economic entities from their own resources. This obligation may be--in justifiable cases--temporarily covered by medium-term revolving-fund credits. Revolving-fund credits should enhance the continuity of production, the marketing of products, the economically desirable placement of the stockpiles; they should stimulate an increase in the revolving rate of revolving funds and the utilization of stockpiles created solely for reasons of exaggerated security. Short-term credits should be aimed at making possible the financing of the temporary equipment-needs of profitable economic operations--including those of production, stockpiling and marketing--and in the area of foreign trade, they should make it possible to buy and sell at favorable times and under advantageous conditions.

(5) In the area of credits to the population, the size of the grants and the conditions of credit must be established in tune with our residence-construction and standard-of-living policy plans.

Guidelines of Enterprise Wage- and Income Regulation

Article 62

(1) Income growth in the majority of the economic branches should be made dependent upon the development of the efficiency of enterprise operations and

on the size of their actual contribution to the national income. Wage regulation in these areas should be tied to enterprise performance, while elsewhere central wage regulations should be applied.

(2) The aim of wage regulation—including that of the tariff system—should be to establish a better ratio between waging and the actual performance of the workers.

Guidelines of Product Merchandising

Article 63

(1) Modernization of the production structure, that is, the reduction of the material and energy needs of production; the improvement of the structure of material utilization and the efficient use of the available raw materials; the realization of rational savings with respect to imported goods, and the more widespread recycling of the resulting wastes must also be promoted by product merchandising measures.

(2) In general, the merchandising of productive means should be carried out without restrictions, using trade techniques. For a defined number of the most important materials and energy sources--and within the framework of the annual plans of the national economy--product merchandising regulations and specifications must be established.

Chapter XII

Guidelines of Decision Making and Organizational System Development

Article 64

(1) The homogeneous economic management activities of the government organs aimed at promoting the realization of socio-political goals laid down in the national economic plan should be continually developed. Changes must be made within the organizational system of economic management, which create more favorable conditions for the effective functioning of the decision-making system.

(2) The principle task with respect to the economic management activities of the government organs is the development of the condition-system of enterprise cooperation and the promotion of the coordination of inter-enterprise relations.

(3) The decision-making jurisdiction of the ministries and enterprises must be more clearly defined, thereby eliminating more and more the need and the opportunities for direct operative intervention. The assistance given to the enterprises by the governing organs must be based on organizational work aimed at increasing real profitability. Market-supervisory operations must be rendered more effective.

Article 65

(1) The further development of responsible, independent economic activities based on profit incentives must also be developed by improving the organizational

system of the enterprises. By introducing solutions which suit the peculiarities of the various activities and types of enterprises, we must, in the course of development, implement the requirements of more efficient economic work.

(2) Relations among research, production and marketing and its organizational framework must be further developed. We must establish an organizational and economic incentive system which promotes faster practical application of scientific achievements.

(3) In order to increase the economic interests and efficiency of certain productive entities, the independence of enterprises within certain trusts, factories within some enterprise and also of plants must be improved; the size of enterprises and the organizational system of guidance must be adjusted as needed.

(4) By establishing appropriate operating conditions for the large-scale enterprises capable of efficient development and the necessary economic and legal conditions required, we must make it possible for the small- and medium-scale enterprises to gain strength, and we must also contribute to the creation of small- and medium scale economic organizations of a diverse organizational structure, which are capable of meeting demands efficiently.

Chapter XIII

Economic System of Enterprises

Article 66

The economic organizations must pursue their independent and responsible activities by taking into account the goals as defined in the national economic plan and the system of regulators established to transmit demands, and on the basis of an enterprise plan which takes into consideration the changing conditions.

Article 67

(1) In enterprise planning and operations, we must direct our efforts more categorically than before toward making certain that, by increasing profitable marketing, enterprise operations are adjusted to market demands and possibilities.

(2) Increased attention must be given to ascertaining that the material and intellectual resources, the manpower, the capacities and reserves available within the enterprises are economically utilized, and that enterprise operations are carried out in a savings-conscious manner. To accomplish this, cost-management must be placed on more solid foundations; the quality of organizing work within the enterprises should be improved; there should be greater coordination between the making and expending of income, and enterprise monetary resources should be spent in a strict, savings-conscious manner.

(3) Cooperation among the producing enterprises--based on contractual ties--in technical development, production, transportation and trade must be strengthened. The production organizing and stimulating role of contracts should be enhanced. Relations between production and trade enterprises on the one hand, and between trade and utilizing enterprises on the other, must better contribute to ensuring that the circulation of commodities remains continuous, and that the efficiency of economic operations is increased.

(4) The level of competence and the leadership and enterprising skills and abilities of enterprise managers should be improved; initiative-taking working methods and styles on part of the managers, which are receptive to changes, should become predominant. We must strive for unity between enterprise planning and ongoing economic operations which enables work to more flexibly adjust to the changing conditions.

Article 68

(1) The internal guidance and incentive system must be further developed in a manner which contributes to the realization of the goals and tasks laid down in enterprise plans, and promotes a better assertion of the effects of the system of economic regulators.

(2) An important condition of the realization of economic goals is the development of factory democracy. The workers must be more fully informed about the situation and the goals of the enterprise, and from this it follows that they must become more extensively involved in defining the tasks to be accomplished. This should help to mobilize and coordinate the collectives, taking into account the individual development of the workers, the fullest possible unfolding of their potentials, and it should contribute to the improvement of the workers' working conditions. We must strengthen public inspection of management efficiency through our democratic forums.

Chapter XIV

Economic System of the Councils

Article 69

(1) The system of measures aimed at implementing the goals of economic and regional development should strengthen the economic independence of the Councils.

(2) The Councils' sources of income must be established in harmony with the economic and regional development goals of the national economic plan.

(3) Decisions by the Councils should be made in accordance with the goals of the national economy, with the central decisions and with the available financial means.

Article 70

The councils should cooperate with the economic entities toward the joint accomplishment of the tasks of mutual interest which are in accordance with the goals of the plan.

Chapter XV

Final Regulations

Article 71

(1) The plan objectives and tasks defined in this law are based on the presently foreseeable trends in world market conditions, and on the development of the efficiency of social production as laid down in the first part of the law.

(2) In the event, foreign economic conditions develop more auspiciously than presumed and the efficiency of production increases at a more favorable rate than planned, the available resource surpluses should be devoted partly to the improvement of the foreign economic equilibrium, partly to the continued modernization of production and to the laying of better foundations for the development of the standard of living. If, however, it turns out that foreign economic conditions develop less auspiciously than presumed, or that trends in the development of the efficiency of production take a less favorable course than planned, the plan objectives must be appropriately revised.

(3) The Parliament authorizes the Council of Ministers to take the necessary measures for the fulfilment of the provisions of the Sixth Five-Year Plan of the national economy, to approve, within the guidelines of the basic economic-political policy, the annual plans of the national economy, and to work out and issue the phase specifications necessary for the realization of the goals laid down in the plan.

(4) The Council of Ministers must monitor the implementation of the plan on a regular basis; it must, in the middle of the plan period, report on the experiences gained from it and if necessary, to make appropriate proposals and in justifiable cases initiate changes in the plan.

(5) The organs of economic management must efficiently and systematically assist and supervise the operations of economic entities, while ensuring the strengthening of enterprise initiative and increasing the responsibility of the economic entities for their own economic decisions and for the efficiency of their operations.

Article 72

In order to accomplish the goals outlined in the plan, the state administrative organs must act according to the laws concerning their scope of authority and in a concerted manner, and should exercise the rights granted to them by statutory provisions--primarily by the law dealing with state enterprises--regarding state enterprises. If the measures needed to be taken exceed their jurisdiction, they must take initiatives to ensure that they are taken by the appropriately qualified organs.

Article 73

This law becomes effective on 1 January 1981.

Parliament, approving and declaring into law the Sixth Five-Year Plan, calls on the working class, the peasantry and the intelligentsia--on all the citizens of our socialist homeland--to use their strength, talents and abilities to their fullest, making every possible effort in working toward the fulfilment of the plan. It also expects that the state administrative organs and the economic

entities systematically implement the decisions laid down in the plan, carry out their efforts in agreement with the goals of the plan—and doing so in concert—and, furthermore, that the appropriate state organs monitor the process of implementation, taking or initiating timely measures as needs for them arise.

Parliament calls upon the unions, social organizations and the corporate organs to mobilize the workers so that the provisions of the law are implemented and the goals of the plan are achieved.

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COAL PREPARATION, CONSUMPTION DEVELOPMENT TASKS DISCUSSED

Budapest ENERGIAGAZDALKODAS in Hungarian No 11, Nov 80 pp 476-480

[Article by Kalman Simon, doctor of technical sciences, Central Mining Development Institute: "Timely Developmental Tasks of Domestic Coal Preparation and Coal Use"]

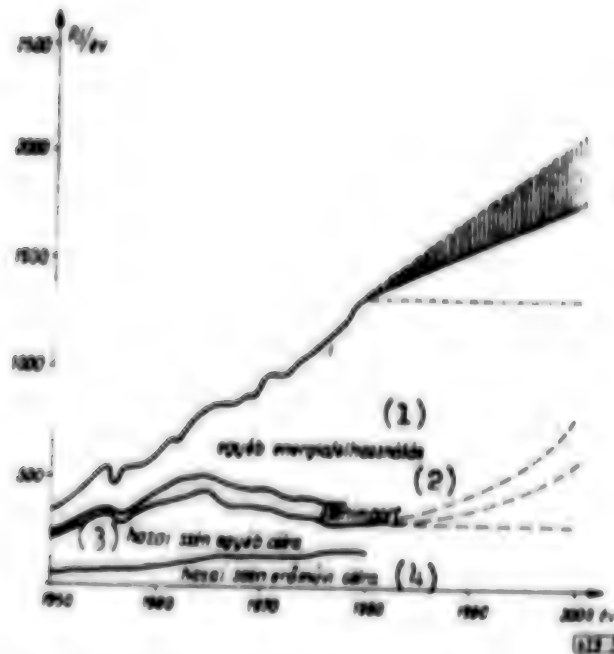
[Text] The difficulties appearing world-wide, and thus in our homeland also, in energy supply have brought to the fore an increased exploitation of each country's own energy resources. In our homeland we can achieve a worthy energy source increment with increased utilization of domestic coal reserves--in addition to the nuclear power plant construction program which can be regarded as having a domestic base also. The development of mining is not enough for this, however, we must also ensure a consumer market for the existing coal and the increment in production as well as product types and product quality which satisfy consumer needs.

All of this necessarily involves a modification of our energy use structure, which at present is oriented to a significant degree toward hydrocarbons. For this reason, before we go into the research and development tasks which belong to the narrower theme of our study, we should analyze the structure of domestic energy use from the viewpoint of our theme--with a brief historical survey and a global glance forward.

1. The Development and Structure of Domestic Energy Use

Figure 1 shows the approximate structure of domestic energy use and its retrospective development for 30 years.

Figure 1. The development of domestic energy use and of coal use therein since 1950.



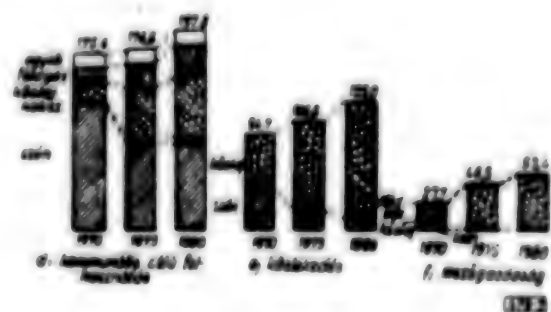
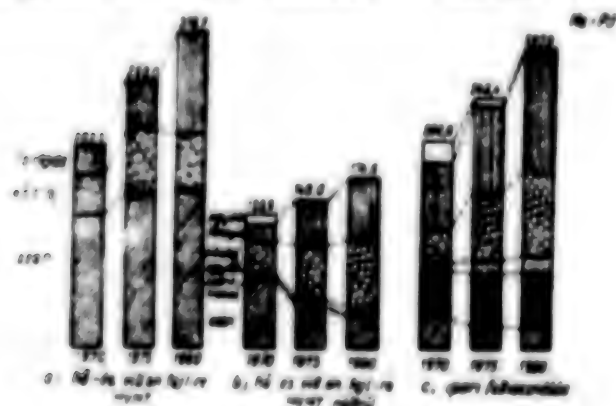
1. ábra A hazai energiaszfekélyezés és ezen belül a szén-felhasználás alakulása 1950 óta

Key:

1. Other energy use
2. Coal import
3. Domestic coal for other purposes
4. Domestic coal for power plants

It can be seen that coal use--and domestic coal production--increased until the middle 1960's, then decreased and has been at virtually its present level since the middle 1970's. Its ratio in the middle 1960's was more than 60 percent but it now does not reach 30 percent. It is characteristic of this decrease in ratio--which corresponds to the international trends--that it came about 5-10 years later than, for example, in western Europe. This phase shift can be found not only in the area of the decrease in the ratio of coal use but also in regard to the return to coal.

Figure 2. The structure of energy use.



2. ábra Energiaszfekélyezés struktúrája

Key:

- a. Generation of heat and electric power, MVMT [Hungarian Electric Works Trust]
- b. Generation of heat and electric power, excluding MVMT
- c. Industrial use
- d. Communal purposes use
- e. Transportation
- f. Agriculture
- egyeb--other
- foldgaz--natural gas
- koolaj--petroleum
- szen--coal
- egyeb szent.--other coal products
- koksz--coke

Figures 2/a through 2/f show the energy structure of the past 10 years by consumer sector. It can be seen from these that the spread of hydrocarbons was not limited to the transportation and communal sectors, it also decreased the ratio of coal use in industrial uses and even in the area of power plant use. Simultaneous with the structural change, naturally, our import dependence increased significantly—as Table 1 shows.

Table 1. The development of domestic energy production and imports between 1970 and 1980.

A hazai energiatermelés és az import alakulása
1970—1980 évek között

M.e.: PJ

	1970	1975	1980
(1) Termelés			
(2) Szén	383,66	307,29	290,90
(3) Kőolaj	79,48	82,31	87,39
(4) Földgáz	134,43	186,22	216,66
(5) Vízenergia	1,16	1,97	2,12
(6) Egyéb	16,73	25,12	23,03
(7) Összesen PJ:	615,46	602,91	618,99
(8) Összesen %:	62,9	53,8	46,2
(9) Behozatal:			
(10) Szén	68,8	58,5	52,82
(11) Koksz	35,49	38,72	47,63
(12) Kőolaj	207,02	342,81	401,18
(13) Földgáz	6,96	27,00	131,80
(14) Villamosenergia	44,92	49,66	86,77
(15) Egyéb	0,42	0,42	0,42
(16) Összesen PJ:	363,6	517,11	720,62
(17) Összesen %:	37,1	46,2	53,8

Key:

- 1. Production
- 2. Coal

3. Petroleum
4. Natural gas
5. Water power
6. Other
7. Total PJ
8. Total percent
9. Imports
10. Coal
11. Coke
12. Petroleum
13. Natural gas
14. Electric power
15. Other
16. Total PJ
17. Total percent

On the basis of long-range forecasts the total energy need will continue to increase, if to a lesser degree than originally hypothesized. As opposed to the old estimates of 2,300-2,500 PJ per year we predict a total energy need of 1,900-2,100 PJ per year by the end of the century, an increment of 600-800 PJ per year. This increment equals our total energy import at this time. Taking into consideration that domestic coal production can be increased from the present circa 300 PJ per year to perhaps 600-800 PJ per year by the end of the century the economic significance of increasing domestic coal use is obvious. We will try to analyze the technical development tasks needed to exploit this potential in accordance with the chief consumer sectors.

2. Tasks Connected With Power Plant Use of Domestic Coals

Power plant use is the most significant mode of coal use even at this time. According to studies done domestic coal reserves, in addition to maintaining existing power plants and expanding the Bicske Thermal Power Plant to 1,500 MW, can ensure a further 500-1,500 MW expansion of the Bicske Thermal Power Plant based on new mines in northern Trans-Danubia, a 1,000 MW expansion of the Gagarin Thermal Power Plant with expansion of the Thorez surface mining, a 300-600 MW expansion of the Pecs Thermal Power Plant on the basis of Maza South and perhaps the creation of a new 900-1,500 MW semi-finished products power plant. New lignite power plants with a capacity of 1,500-2,500 MW could be created on the basis of lignite deposits in Torony, Bukkabrany and Fuzesabony. The domestic electric power industry has already achieved results at the world level in the area of power plant use of domestic lignites and poor quality coals. In this case—and we will be returning to this—the quality parameters causing problems in operation can probably be improved significantly with coal enrichment. So there are no obstacles, either in mineral reserves or power plant technology, to a development of coal based electric power production in step with the increase in needs.

However, the coal power plant development program is determined by the developmental rate of electric power needs and the nuclear power plant construction program therein. Since the new forecasts predict a more moderate increase in electric power needs within total energy needs also we can ensure satisfaction of the needs in the future with an innovative phase of electric power production

based on coal, in addition to nuclear energy. By the end of the century the Bicske Thermal Power Plant will go into operation on a coal base and reconstruction of existing power plants will increase their capacity by circa 500-1,000 MW. I regard the technical development tasks connected with these things to be the timely developmental tasks belonging to my theme.

First among these tasks I mention the problem of coal quality. At present, in regard to the quality requirements for power plant coals, the practice is for the power plants to get the particle fractions with higher ash content or, in the Mecsek area, the semi-finished products of washing. This practice has not caused any special heating technology problems in the equipment which was designed for high specific ash content--with the exception of the Visonta crude lignite. Even in the case of the Visonta lignite the power plant has now overcome the heating technology problems. But power plant experts justly object to the varying quality of power plant coals and the question arises if there might not be advantages from the viewpoint of power plant technology to decreasing the ash as opposed to present practice. We have examined this problem in more detail thus far in the burning of Borsod brown coal and the Visonta lignite.

The three-product dressing works planned for the central classifier in Borsod will remove the crude waste and not only improve the quality of housekeeping coal but also will provide a power plant semi-finished product with somewhat more favorable specific ash content than before and, not least of all, will decrease the variation in the quality of the coal.

A technical solution to removing waste from the Visonta lignite would be of even greater significance to the Gagarin Thermal Power Plant. According to research by the Central Mining Development Institute--and proven by an experimental enrichment operation--the Visonta lignite's ash value can be reduced by means of waste removal from the present circa 33 grams per MJ to 23 grams per MJ, ensuring even quality as a power plant coal supply. According to a heating technology experiment done at the Gagarin Thermal Power Plant and according to studies done at the Power Plant and Network Planning Enterprise (EROTERV) the use of enrichment would not only improve the economicalness of the reconstruction or expansion of the Gagarin Thermal Power Plant but also would improve technical and economic results in operation of the existing power plant by improving present conditions, by reducing the magnitude of the supporting flame.

Improving the quality, through waste removal, of the Mecsek semi-finished product, which also has a high ash content, for the semi-finished product power plant which will become necessary in the event of the development of the Maza South area constitutes a subject of study for similar reasons.

In the case of Eocene coals with a specific ash content of about 20 grams per MJ the quality improvement which can be achieved by waste removal does not produce such striking results as in the case of the Visonta lignite or the Mecsek semi-finished product but one cannot simply dismiss the usefulness of this.

Construction of the Bicske Thermal Power Plant and the cited reconstructions and possible expansions understandably require the solution of a number of developmental tasks in regard to power plants technology which I do not consider myself qualified to discuss but I do feel that the members of the Hungarian Electric

Works Trust (MVMT) and EROTERV should consider the foreign innovations which could be used here at home also, for example fluid burning or the creation of a gas-steam cycle combined block which may become timely later in some expansion. In theory a coal based fuel gas could be considered also for use in existing power plants burning hydrocarbons.

I consider it worth noting in this regard that in the future a greater role will be played in domestic energy supply by linked heat service, on the basis not only of coal power plants but also nuclear power plants and hydrocarbon power plants too. In the case of coal the developmental tasks needed for this from the power plant side should be examined within the framework of the reconstructions already noted several times and possibly in connection with the construction of the Bicske Thermal Power Plant--in regard to South Pest and North Buda.

I note here that in the future the linked heat service will probably go beyond the environment of the power plant strictly interpreted and may become a piped heat service worthy of the popular name (remote heat service). The coal based ideas being studied in the Energy Management Institute include, in addition to the already mentioned Bicske-Budapest hot water pipes, hot water pipes between Kazincbarcika and Miskolc, Dorog and Eastergon and Inota and Varpalota and heat supply to Győr city from a heating power plant outside the city limits. In the case of the planned boiler capacity of the latter installation (2 x 220 tons of steam per hour) the environmental protection problems could be decreased also by fluid burning--combined with limestone addition--which may be a realistic alternative as an innovation ripe for operation.

3. Developmental Tasks of Coal Burning in Small and Medium Capacity Boilers

This may be the consumer category in which the decline of coal is most spectacular as opposed to hydrocarbons. Figure 2/b does not fully reflect this decline either because the decline had already begun in the 1960's. Experts generally agree that the hydrocarbon orientation which has developed in this consumer category is no longer entirely justified. A reduction in hydrocarbon needs can be achieved by bringing back some of the old coal consumers, shifting some existing hydrocarbon consumers to coal and primarily by basing new consumption on coal. According to calculations by the Tatabánya Coal Mines the coal needs of this consumer sector could be tripled by the end of the century thus redeeming hydrocarbons equal to 1.3 Mt of petroleum. The extra coal for this development (60 PJ) can be ensured from the supply side but to realize it would require boiler reconstruction or creation of new boilers with a steam capacity of about 4 kilotons per hour.

One cannot imagine the creation of the boiler park or the winning of boiler operators without a successful solution of substantial technical development tasks. Such tasks are:

--providing boiler types which approach hydrocarbon fueled boilers technically, in burning efficiency and in culture;

--building up an appropriate planning capacity, consulting service and service network;

--expanding the variety of coal types and improving coal quality; and

--developing a more cultured method of shipping and storage.

Instead of detailing these tasks I only want to point out that in the future a role must be given to fluid burning in our homeland in addition to modern forms of grate burning, which are well proven and usual in the industrial boiler park. An increase in burning culture can be expected from this burning method--because it can be controlled well and can be made automatic--and this burning method makes possible an expansion of the coal base in the direction of poor quality coal types (lignites and black coal semi-finished products) and it makes possible a reduction in sulphur emission combined with limestone addition.

4. Developmental Tasks Connected With Direct Use of Coal and Coal Products by Industry

In this consumer category the greater emphasis is not on coal use but rather on the use of coke which is produced from coal. At present domestic coke production of 950 kilotons per year covers about 40 percent of the coke needs and the Mecsek mines provide about 480 kilotons of the approximately 1,300 kilotons per year of cokable coal concentrate needed for this. After the planned reconstruction of the coking works of the Danube Iron Works coke production will increase to 1,300 kilotons per year and the concentrate need will increase to 1,750 kilotons per year; the increment can be covered on the domestic raw material base within the framework of the reconstruction of the existing Mecsek mines. The reconstruction will put an end to the scattered processing of the Mecsek coals--in Pecs, Komlo and Dunajvaros. The 3.5 Mt per year raw coal production can be processed in one place, in the expanded Pecs enriching works. The technology of the enriching works (heavy suspension enrichment plus flotation combined with intermediate pulverization) will increase the previous 18 percent coking coal concentrate yield to 28 percent and will meet the quality requirements of current metallurgical coke manufacturing technology. In addition to the 900 kilotons per year of coking coal concentrate the development will provide 29 PJ per year of energetics coal for the Pecs, Komlo and Dunaujvaros power plants and other local consumers.

The reconstruction of the operating Mecsek mines will provide in the 1990's only about 50 percent of the country's coking coal concentrate needs. With the planned development of the coking works at the Danube Iron Works it will be necessary to import 1,100-1,200 kilotons of coke per year for some time. In the event of the presently planned mining developments only 25-27 percent of the entire coke needs can be provided on the domestic coal base. Considering the ever more difficult economic conditions for importing coke and coking coal a real economic interest attaches to a further development of domestic coking coal production and the domestic metallurgical coke manufacture based on it.

Lias geological prospecting now under way promises a serious coal reserve for this in the so-called Maza South coal area. Although putting Maza South into operation seems probable only in the eighth or ninth 5-year plan it is already timely to conduct the enrichment technology and coking technology research needed to prepare the necessary economic and branch decisions.

In making decisions serving satisfaction of domestic coke needs, however, one must not ignore the fact that a significant portion of coke consumers (about 30 percent) do not need metallurgical coke quality. We might mention as the most significant such consumer ore sintering, the coke powder needs of which are not being satisfied, to a significant degree, by the natural allotments of metallurgical coke manufacture or import. To satisfy this need one might suggest setting up a brown coal coking works in Sajokeresztur alongside the Borsod Ore Sintering Works.

According to tests being done abroad, but not yet complete, use of the Lurgi-Salem technology seems most appropriate for coking the Borsod coal. With this technology one can obtain granular coke with a calorific value of 25 MJ per kilogram from enriched coal of 1-40 mm. About 50 percent of the coke has a particle size of 6-30 mm and can be used for household or industrial purposes.

With brown coal coking using the Lurgi-Salem system one gets as a by-product about 5 tons of high pressure steam for every ton of coke; this steam could be used in the planned Miskolc remote heating system.

In addition to the metallurgical and machine industry the largest direct user of coal is the construction industry but the coal consumption of this industry shows a strongly decreasing trend. According to a relevant study by the Energy Management Institute this decrease is not justified and with appropriate technical measures there is a way not only to maintain the present level in this branch of industry but also to increase coal consumption. The greatest possibility would be its introduction for precalcination in the cement industry or for mixed burning. They should study its use for precalcination in Beremend, Hejocsaba and Belapatfalu and in the Vac Cement Factory. In the eighth or ninth 5-year plans it is justified to plan a new cement factory for Trans-Danubia with mixed burning or at least coal based precalcination.

It is also unjustified that lime burning in Hungary is done almost exclusively on a hydrocarbon base. The reconstruction of the lime works due in the 1990's could be used to convert the hydrocarbon based lime burning furnaces to a coal base. A more modest replacement of hydrocarbons is possible in the area of the brick and cement industry also.

To sum up, over the longer range one might reckon with a replacement of 10-20 PJ per year of hydrocarbons in the area of the construction industry, the smaller figure presuming precalcination and the larger figure presuming the use of mixed burning.

Naturally construction industry use poses more severe quality requirements when using accustomed burning technology because it is sensitive not only to ash but also to sulphur content. It can be expected, however, that this quality requirement can be met by the Mecsek semi-finished product in Trans-Danubia (the improved quality has a calorific value of about 20 MJ per kilogram), by the Lyuko mines in Borsod in Northern Hungary and possibly by Nograd coal with waste removal. It is also justified that the mines provide to the construction industry not natural particle coal dust but rather coal powder ground to the proper fineness. All this means that even in their medium range developmental thinking the mines must take into consideration a solution to enrichment and grinding.

One can also mention here as a potential coal consumer the chemical industry, and within this ammonia and methanol manufacture. Although the chemical industry does not now manufacture methanol and produces ammonia solely on a natural gas base the synthesis gas needed for these two products could be produced on a coal base too with modern coal gasification technologies (the Koppers-Totzek process and the Lurgi process). With the Lurgi process one can also get as a by-product a methane rich gas which could be fed into natural gas lines. According to tests done abroad not only could our brown coals be used as a raw material for synthesis gas manufacture but also our better quality lignites (Bukkabrany and enriched Visontó).

Realization of methanol manufacture on a coal base could reduce the need for hydrocarbons in the transportation sector, which is not discussed separately, since methanol by itself or mixed with gasoline can be used well as a motor fuel.

Thinking in terms of fuel periods it can be shown that in the development of the energy structure the age of hydrocarbons is "shorter" than the coal period, not only because of the general acceleration and because of mineral resource conditions, but also because hydrocarbons are the fundamental base for the synthetics period. It follows from this that the synthetics period may be "longer" and more prevailing to the extent that the chemical industry and the hydrocarbon based synthetics manufacture can shift to a coal base in the more distant future. We should pay attention already to these contact points of structural changes in fuels and structural materials.

5. Tasks Connected With Developing Agricultural Coal Use

Practically speaking agriculture did not use coal in the period examined. According to a survey by the Tatabanya Coal Mines even today thermal energy use plays a significant role in the energy needs of agriculture. The largest part of these heat needs appear in drying products and fodders and in heating greenhouses, animal shelter and industrial installations. For health reasons one probably cannot count on direct coal burning in drying products but rough fodders could be dried with coal burning. Here also, for the previously cited reasons, fluid bed coal burning seems an advantageous technological solution.

Considerable hydrocarbons (5-6 PJ per year) might be saved through fodder drying but the other consumers listed represent a good bit greater market for wherever the need reaches the value of 4-6 GJ per hour the building of modern coal burning boilers seems advantageous. The conditions for realizing this potential possibility are the same as those already detailed for industrial boilers.

6. Developmental Tasks in the Area of Communal Coal Use

Although there are a number of environmental protection and technical considerations against direct coal burning in communal service the coal and briquet consumption of this sector--at least in the Fifth Five-Year Plan--decreased more slowly than expected and in the supply situation which has not developed it can be expected to maintain its level over the longer range.

Ensuring suitable quality of housekeeping coals is an important task of mining and --in cooperation with domestic trade--it should increase the cultural level of

popular coal supply. The enrichment works planned for the central classifier in Borsod and the classifier in Felsogalla are aimed at improving coal quality; after they go into operation they will provide about 3 Mt of good quality enriched product per year.

A long-range developmental task, already timely from the viewpoint of preparatory activity, is domestic use of briquet smoke reduction.

The already mentioned ideas about remote heat service serve to improve the cultured nature of communal services as will the SN gas (synthetic natural gas) which may become available as a by-product of chemical products manufacture. But it does not seem timely to domesticate in the period examined a technology aimed solely at manufacturing SN gas.

7. The Research and Social Activity Needed in the Interest of a Better Solution of the Developmental Tasks

The great majority of the developmental ideas outlined above represent alternative use possibilities and their swift realization all together would go beyond the mining increment which can be realistically hypothesized—300-500 PJ over 15-20 years.

Our present information, however, does not make possible a more concrete designation of developmental goals; additional significant research work is needed for this.

Unfortunately the theme of coal use was rather neglected from the research viewpoint in the past period and the research was limited to a few research sites (KBFI [Central Mining Development Institute], VEIKI [Electric Power Industry Research Institute], the Tatabanya Coal Mines, and the MTA SZKKL [Inorganic Chemistry Research Laboratory]) and their partner institutes. A change in this respect can be expected if approval is given in the National Medium Range Research and Development Plan to the program proposal "Development of Coal Preparation, Coal Enrichment and Coal Burning" and in the National Long Range Scientific Research Plan to the proposed "Energetics Target Program."

But in working out the pertinent developmental conception and in selecting, developing and realizing the several tasks we cannot do without the active participation of the energetic guard primarily interested in solving these tasks, a guard which has been brought together socially by the Coal Use Special Department within the Energetics Scientific Association. Within the framework of this special department we want to report on and debate our goals in more detail in the future, seeking the advice of experts.

I hope that this new special department will soon grow up to the other special departments of the ETE [Energetics Scientific Association] and will aid the realization of proposals advantageous to the national economy.

CHANGES IN METHODS OF PREPARING 1981-1985 PLAN DESCRIBED

Warsaw GOSPODARKA PLANOWA in Polish No 7-8, Jul-Aug 80 pp 365-370

[Article by Andrzej Karpinski]

[Text] The resolutions of the party's Eighth Congress concerning the key policies that will guide the development of our economy in the 1980's pose new tasks for all levels of the planning apparatus. The launching of a large-scale effort aimed at drafting the five-year plan for the period 1981-1985 should be singled out as being one of the most important of these tasks.

In this connection the working ground rules, methods and procedures to be employed in the drafting of the five-year plan, as presented by the chairman of the Planning Commission,* were reviewed at a meeting of the Council of Ministers held on 10 May 1980. The decisions made in this regard were then set forth in a resolution of the Council of Ministers (dated 27 May 1980) concerning the procedures and schedule of work on the drafting of the five-year plan for the period 1981-1985 and the 1981 NPSG [national socioeconomic plan].

Owing to a number of different reasons, the 1981-1985 plan will be drawn up under conditions that are much more complicated than those which coincided with the drafting of previous five-year plans. These problems have already been spelled out in an earlier issue of GOSPODARKA PLANOWA.* There does not appear to be any need to go over these problems once again in this article.

It should be noted, however, that the conditions which are currently affecting the growth of our economy raise a number of completely new problems that need to be resolved during the course of work on the drafting of the five-year plan, and, in addition, they make it necessary for us to come up with new methods and to make major changes in the way we deal with a number of specific issues. These new solutions and changes will at the same time signify an important step forward toward the refinement of the five-year planning process, a goal which was set forth at the Eighth Congress and in a speech given by the president of the Council of Ministers, Edward Babiuch, in the Sejm on 2 April 1980.

* Vide TRYBUNA LUDU, No 112, 1980 pp 1-2.

* Vide GOSPODARKA PLANOWA No 11, 1979, pp 1-3.

General conditions, including in particular the need to mount an intensive effort to harness the untapped resources of our economy and to make far-reaching changes of a qualitative nature in its structure, testify to the advisability of revamping the procedures and degree to which individual management echelons participate in work on the drafting of this new five-year plan.

At this point it is worth recalling that many of our previous five-year plans were drawn up for the most part by means of the staff method. Work on the drafting of these plans was focused largely at the central level, i.e., in the Planning Commission and the economic ministries, coupled with mostly minor inputs on the part of the associations and generally negligible inputs on the part of enterprises and other entities at the lowest level of the management hierarchy.

The task set forth at the Eighth Congress that called for bringing about fundamental improvements in management efficiency as the principal means for fostering the continued growth of our economy gives rise to the need for enterprises to participate on a large scale in work on the drafting of the five-year plan. For only at the enterprise level is it possible to identify those areas--which are so important from the standpoint of the plan--in which there exists unharnessed potential for boosting management efficiency. For this reason, also, work on the preparation of draft plans for individual enterprises should be combined with a widespread public campaign aimed at detecting areas of unharnessed potential at the enterprise level, and these two efforts combined should serve as a great school of economic education for the workers.

Therefore, in keeping with the aforementioned government decisions, associations, combines, selected enterprises and selected organs of local government will take part in work on the drafting of the new five-year plan. These various entities will prepare their own draft versions of the five-year plan.

At every level of the management hierarchy the planning work that is done should correspond to the specific functions of each level within the overall framework of the management system. And so the planning work that is done in the enterprises and in entities at the lowest level of the management hierarchy should be focused on finding better ways to utilize raw materials, energy resources, fabricating materials, and production capacities, on improving product mixes (in particular by curtailing the production of goods that are excessively materials- and energy-intensive in favor of producing more goods with the lowest materials-intensiveness ratings), on improving the design of products and manufacturing technologies, and on improving the organization of labor, production and management. For it is upon these factors that small-scale improvements in efficiency depend.

The planning work that is done in the associations should in turn--disregarding the collation and validation of the draft plans drawn up by enterprises--be focused primarily on disclosing those kinds of untapped resources and potential that are harnessable solely at this level of the management hierarchy. This means in particular that goods and materials stocks should be allocated in such a way as to, above all, make the best possible use of those production capacities which are most advanced and most efficient, thereby insuring the most economical utilization of raw materials and the maximalization of the production of goods which the public wants to buy. This also means that we must strive for the more balanced growth of

the economy's sub-branches in terms of mutual accommodations on the part of the raw-materials base, the co-production base, industries producing semi-finished goods and industries producing finished goods. Finally, this means that we must validate and make improvements in co-production relationships, raise the specialization of industrial production to a higher level, step up our export sales efforts and make our import transactions more efficient, and establish new undertakings designed to insure the reduced consumption of energy, fuels and raw materials and, in the broad sense, to promote scientific and technological progress.

Similarly, in addition to the validation and collation of plans drawn up by the associations, the plan drafting work that is done in the economic ministries should be focused on: determining the degree to which individual associations and products will receive preferential treatment, the analysis and coordination of structural changes that cut across sectoral boundaries, and the launching of projects designed to promote scientific and technological progress, because these are all integral parts of a policy aimed at bringing about improved efficiency on a macroeconomic scale.

At the same time, it would be a good idea to take a fresh look at the problems associated with the ways in which individual components at various levels of the management hierarchy work together in the course of drawing up their respective plans. This collaboration should be based not on the formal rules of hierarchical pecking orders, but rather on the practice (already in use in some socialist countries) whereby enterprise plans are drawn up jointly by enterprises and the association to which they belong and whereby association plans are drawn up jointly by associations and the relevant ministry to which they are accountable. This would be tantamount to the adoption of the principle according to which planning work is conducted simultaneously at several different levels of the management hierarchy.

The manner in which work proceeds on the drafting of plans at the enterprise level is of crucial importance. We cannot permit a situation to arise in which the draft plans of enterprises are transformed into mere lists of demands which under present conditions would be too difficult to meet and whose fulfillment would be less than realistic.

It is therefore of fundamental importance that this planning work should be channeled in a direction that is consistent with the spirit of the resolutions of the party's Eighth Congress, and this means that this planning work must be geared first and foremost toward the improvement of management efficiency.

In particular this means that it will be necessary to delineate the range of untapped resources at the disposal of a given enterprise (as of 1980) in terms of the way in which it utilizes its fixed assets, raw materials stocks and labor resources, and in terms of its manufacturing technology processes, and to project the kinds of economic and technical measures that will have to be taken in order to mobilize these resources.

On this basis, and after reaching an agreement with the associations as to the growth needs and capabilities of their subordinate enterprises, it will then be necessary to set a feasible output target for the year 1985. This planning work

should also culminate in the drawing up of a statement outlining the impact of the proposed growth of a given enterprise on the locality in which it operates. So this means that it will be necessary to spell out those aspects of such a growth plan that will have a critical impact on regional and land-use planning programs.

Proceeding from an awareness of the need to give more responsibility to the gminas [rural parishes] and other local governmental units, consideration is being given to the question of permitting selected organs at the level of the management hierarchy to draw up their own draft five-year plans. Here we are referring in particular to the capital cities of the voivodships, other cities with populations of more than 50,000 (which have access to their own planning services), and also to gminas and towns associated with gminas that already qualify as established microregions or those in which there has been an especially marked upsurge in capital investment activity.

We need to take a different approach than hertofore to the problems associated with procuring supplies of energy, fuels and raw materials, because studies have shown that supplies of energy, fuels and raw materials will be a key factor tending to retard our economic growth in the 1980's.

In the course of our work on previous five-year plans the projected rate of growth of industrial production was considered to be a leading indicator. The aggregate target for deliveries of energy, fuels and raw materials was tailored to fit the accepted target for industrial output. Now, in contrast to the way things used to be, potential deliveries of raw materials and fabricating materials will play a role of critical importance.

This is why the guidelines governing planning work at the ministerial level do not set goals that are too extravagant when it comes to the aggregate volume of industrial output.

On the other hand, during the preliminary phase of our plan drafting work it is expected that a thorough study will be made to identify potential supplies of 68 basic categories of energy, fuels and raw materials delivery channels. This study will cover, among other things, the anticipated increment in the production capacities of extractive industries resulting from the completion of capital construction projects already under way, the results of consultations on barter-trade agreements among the socialist countries slated to go into effect during the period 1981-1985, and a realistic appraisal of the deliveries that we can expect to receive from the capitalist countries, based on an analysis of our ability to pay for these deliveries.

A feasible level of supplies of raw materials and fabricating materials broken down on a ministry-by-ministry basis should be a key parameter in all of our plan drafting work. The ministries and associations are in turn faced with the task of allocating available supplies of raw materials in such a way as to, in effect, insure optimal output, especially in terms of those goods earmarked for the export market and the domestic consumer goods market. In this sense aggregate industrial production will be measured in terms of the volume of goods supplied to end users and not in terms of gross output.

Under these conditions an increase in industrial output will be predicated upon the drawing up (with the agreement of the associations and enterprises) of a list of proposed economic and technological projects together with a statement of the capital outlays that will have to be made for this purpose, outlays which may make it possible to reduce the unit consumption of raw materials or to use alternative raw materials that are more readily available, especially when it comes to using domestic raw materials in place of those which we buy under difficult and costly terms from the highly advanced capitalist countries.

This is why the guidelines for work on the new five-year plan spell out suggested indicators for reducing the unit consumption of energy, raw materials and fabricating materials for each and every ministry. In the course of drawing up their draft plans it will be up to the individual ministries to find ways to meet these indicators and to reinforce their draft plans with specific recommendations for cost-saving measures.

The end result of all these measures, after sifting through them to select those which are most efficient, will be a program for the conservation of energy, raw materials and fuels. This program will be an integral part of the five-year plan, and it will also encompass suitable objectives in the area of capital construction policy. This is a new arrangement that will be conducive to the controlled implementation of structural changes aimed at bringing about a faster reduction in our economy's presently high levels of energy and materials intensiveness.

Guided by these same motives, plans are being made to act more promptly than in the past with a view to the implementation of preliminary agreements between the ministries on materials deliveries, including materials scheduled for delivery under the terms of co-production agreements. These preliminary agreements should be worked out during the period between the issuance by the government of the guidelines governing plan drafting procedures and the formulation of draft plans by the individual ministries. It is expected that these agreements will form the basis for the drafting of long-term co-production contracts which should be entered into by the appropriate ministries as soon as the five-year plan has been formally ratified and which should remain in effect for the duration of the five-year plan period. It is also expected that special procedures will be adopted for reviewing conflicts that arise during the life of these agreements between manufacturers and clients, something which should produce positive results by fostering the internal balancing of production and procurement plans.

Our ability to pay for imported goods, especially goods imported from those countries to which we are going to have to accelerate the repayment of our loan debts in the years to come, is another factor, in addition to the problem of raw materials procurement, which will hinder the growth potential of our economy during the next 5 years.

This is why it is necessary to come up with new ways of thinking about and carrying out our work on our program for the growth and activization of export sales.

According to the way in which five-year plans were drawn up in the past our export sales potential was designated as being an end result based on our level of industrial output and capital investment and on the degree to which the internal needs

of our economy are met. To put it this way amounts to a slight exaggeration and over-simplification, but it properly reflects what is considered to be a general tendency.

The most important change in the way we look at this problem in the context of the next five-year plan is based on the fact that an integral part of the draft five-year plan at all levels of the management hierarchy will be the plan for stepping up export sales to those countries which are important to us from the standpoint of our debt servicing needs, and this plan will be backed up by a capital investment program that is specifically geared toward promoting the growth of export-oriented industries. This, in essence, will be the first time in our history that we have adopted an export-oriented capital investment program.

At the same time it is planned that in order to meet export needs special procedures will be followed for the purpose of putting to work idle or underutilized production capacities that are identified during the course of work on the drafting of the plan. This should make it possible to boost export sales not only by means of new capital investments, but also by means of the reallocation of existing production potential.

In the course of our work on the next five-year plan fundamental importance is being accorded to the task of bringing about an improvement in the structure of our export sales to both payment zones [socialist and capitalist countries] in terms of the improved efficiency of these transactions. This means that it will be necessary to analyze the structure of our export product mix and the level of prices realized through export sales.

Finally, the strong export-oriented thrust that should be a characteristic feature of the next five-year plan is reflected in the accepted principle according to which changes in the system of management will be predicated first and foremost on the desire to increase export sales by granting special powers and increased decision-making authority to economic organizations with a high degree of specialization in the export trade area.

The need to stabilize our economy and to overcome the imbalances that arose in the 1970's between its individual branches and components means that it is also necessary to re-examine problems associated with the proportional allocation of production capacities.

It is of crucial importance in this regard that we should make a more thorough appraisal of the degree to which production capacities are not being utilized, pinpoint those areas and phases in which production capacities are not being utilized on an optimal scale, determine the reasons for this state of affairs, and then propose measures aimed at improving the utilization of our production capacities and stabilizing the economy. To this end, and working within the framework of the preliminary planning projects mandated under the terms of directive no 14, dated 5 May 1980, of the chairman of the Planning Commission, the ministries were enjoined to carry out certain specific tasks. Accordingly, each ministry was called upon to specify the volume of increased output that was to be achieved by means of the improved utilization of existing production capacities.

In order to strengthen the plan's internal coordination, great importance is supposed to be attached to the reaching of a determination as to the full range of benefits resulting from the completion of in-progress capital construction projects which by 1985 are slated to have an impact on the level of materials and equipment procurement, the level of output and foreign trade turnover, and the demand for shipping, energy and co-production services. The reason for this is that this section of the production program is as a rule characterized by a high degree of specificity. It was for this reason that the chairman of the Planning Commission under the Council of Ministers issued directive no 11 dated 24 March 1980 concerning the writing of comprehensive reports on in-progress capital construction projects in order to meet the needs of those working on the draft plan for the period 1981-1985, in accordance with which appropriate action was taken at the ministerial level.

During subsequent phases of the plan drafting process the initial output targets, as determined in accordance with allowances made for anticipated improvements in the utilization of existing production capacities and the completion of in-progress capital construction projects, will be augmented as a result of specific decisions made at a later date concerning additional new capital construction tasks aimed at increasing output and export sales or at reducing raw materials consumption. Some of these specific measures will be written into the plan coupled with a case-by-case accounting of their impact on targets related to output, export sales, raw materials consumption and so on in a manner that makes it possible to preserve the proportional stability of the plan based on a much more thorough and more comprehensive understanding than before of the full range of consequences stemming from the launching of new capital construction projects. In practice this arrangement should increase the plan's internal consistency and cohesiveness in terms of its lateral relationships.

New conditions mean that it is also necessary to take a different approach to the planning of capital construction projects. The plan drafting procedures that were used in the past were based on the setting of an aggregate volume of capital spending for the individual ministries as early as the date when the Government Guidelines are issued for the drafting of the ministerial plans, hence during the early phase of the plan drafting process, and on the tailoring of other plan indicators to fit the level of anticipated capital spending--a practice which comes as second nature to our planners. These procedures are not suitable when it comes to addressing our present needs because these procedures, used in the drafting of the capital investment plan, led to the maximalization of new capital construction projects, the overextension of the capital spending front and the repudiation of the most efficient kinds of capital construction projects geared to promoting the more rational utilization of raw materials stocks and other factors of production in favor of projects aimed at building larger production capacities.

The need to increase the share of capital spending on replacement-modernization projects and to economically manage capital spending on projects designed to boost efficiency, projects which heretofore have often been repudiated in favor of spending on new capital construction, means that we must be much more selective and discriminating when considering new capital investment ventures, while at the same time applying strict efficiency-minded criteria.

Consequently, it is now agreed also that the aggregate level of capital spending in the individual ministries will not be set until the final phase of the plan drafting process following the selection by elimination of the various capital project proposals contained in the draft plans of the enterprises, associations and voivodships. The main criterion to be employed in this elimination process will be the efficiency of the proposed ventures as measured both in terms of cost-benefit ratios and also in terms of the socioeconomic usefulness of the anticipated benefits. The departure from the practice of setting aggregate levels of capital spending for the individual ministries as one of the initial premises of the plan drafting process is an important change which will require some psychological adjustment on the part of planners.

The new method of preparing the draft capital investment plan presupposes the need to take a different approach to three of the categories of capital construction ventures (we are here disregarding the fourth category, i.e., small-scale capital improvement projects that are carried out on the basis of special regulations and in relation to which existing procedural rules will be retained).

The first category is made up of in-progress capital construction projects. The levels of spending on this category of capital ventures will not be set until after a general survey has been made of in-progress capital construction projects from the standpoint of the feasibility of concentrating outlays on the construction of those kinds of facilities which would yield the fastest return on investment, and curtailing the capital investment front. To this end a study will be prepared to evaluate the chances of putting these capital projects into operation in the immediate future in keeping with the aforementioned directive no 11 of the chairman of the Planning Commission under the Council of Ministers.

The second category of capital projects is comprised of ventures generally recognized as being strategic in nature, that is, projects arising out of the state's long-range economic policies or projects which are critically important to the realization of social goals. Levels of spending on these kinds of ventures will be determined on a case-by-case basis for specific capital construction tasks.

This category should be regarded as comprising key capital construction projects in the fuels and energy industry, the raw materials extraction industry and in industries producing certain kinds of basic fabricating materials, capital projects aimed at increasing the shipping capacities of the transportation industry serving major transportation arteries, pivotal capital projects aimed at boosting export sales on those markets where terms of payment are most difficult, capital projects that are essential for the purpose of complying with the terms of existing contracts on industrial specialization and co-production in CEMA, capital projects designed to provide for the recycling of scrap and waste raw materials, certain capital construction projects in food producing industries, housing construction (including the installation of utilities and services), and key capital projects in the area of the social services.

The third category will be made up of miscellaneous capital projects, including in particular capital projects in manufacturing industries. Spending levels in this category will be determined (with the participation of the banks) by selecting those ventures which are most efficient while staying within the limits set by the total amount of capital appropriations earmarked for this purpose in the central plan.

The main criterion used in choosing which of these ventures will be approved will be the extent to which they will serve to boost the efficiency of our export sales, since this is the factor that will determine the extent to which we will be able to pay for imports of raw materials and fuels. In addition to capital projects that enhance our prospects for increased export sales, preference will be given to those kinds of capital ventures that insure a reduction in the unit consumption of energy, fuels and fabricating materials and conserve direct labor (e.g., projects designed to bring about the mechanization of auxiliary operations and in-plant conveyance operations). Priority will also be given to capital projects that make it possible to cut back on imports, as well as to those that serve to broaden the domestic raw materials base. This category of capital projects will include ventures whose estimated costs exceed a set limit, i.e., projects that are larger than the small-scale capital improvement projects which will be carried out--as was pointed out above--in accordance with existing rules.

It is apparent, therefore, that in the planning of capital construction projects steps will be taken, for the most part, to dispense with subjective planning, i.e., the setting of absolute spending limits for individual ministries, in favor of adopting a task-oriented objective planning strategy.

Are these changes necessary and where did they originate? First, under conditions marked by an overextended capital investment front the setting up of strict controls over the commencement of new capital projects may help to reduce the overall level of tied-up capital funds. Second, under conditions marked by limited opportunities for capital investment it is essential that a strictly selective review should be made of new capital project proposals so as to insure that only the most urgent tasks are carried out. Finally, only by adopting an objective planning strategy will it be possible to give priority to the less spectacular, but more important ventures that are geared toward the enhancement of management efficiency.

By way of recapitulation, the changes in the procedures employed in the planning of capital construction projects can be summarized in the following five points.

1) Levels of spending on in-progress capital projects will not be set until after a general survey has been made of in-progress capital projects so as to make sure that the capital investment front will already be in good order by the time the new five-year plan gets under way.

2) Levels of spending on so-called "open-ended" purchases of machinery, equipment and transportation vehicles distributed by central authorities will not be set until after the central distribution lists for this equipment have been finalized. Hence, this will amount to a complete reversal of past practices in this regard.

3) Levels of spending on open-ended purchases of equipment that is not centrally distributed will not be set until information becomes available on the amount of capital investment funds committed to the purchase of equipment and transport vehicles that are centrally distributed so as to put a stop to the practice of earlier years when it turned out that after the central distribution process had been completed there was not enough money left over for the purchase of machinery and transport vehicles, a practice which was to blame for chronic overruns of the capital construction plan under the heading "purchases."

4) A new category of capital projects is being introduced, namely, modernization capital projects geared toward the improvement of efficiency, and in particular toward the conservation of energy and materials. This category's share in total capital investment outlays will be gradually increased. Approval for the launching of these kinds of capital projects will be given on the basis of a selection process administered by the banks and on the basis of the optimal cost-effectiveness criterion.

5) Recommendations made by the ministries concerning those capital projects which they deem to be most urgent will not be reviewed until after the situation on the capital investment front has been straightened out and after a decision has been made as to the amount of funds that will be made available for purchasing and capital improvement investments, i.e., not until the final phase of the capital investment plan drafting process.

In the course of our work on the drafting of the five-year plan an entirely new approach needs to be taken to the process of making allowances for requirements arising out of the long-range integration program of the CEMA countries. Since the scale of these integration ventures was never too large to begin with, they used to be accounted for in annual plans or also in a manner that made it seem as though the plan was bypassed altogether. This will no longer be possible now, or rather in the future. For Poland is a partner in the implementation of several long-range target programs of cooperation among the CEMA countries, programs that were drawn up for the first time during the period 1976-1980. In order to carry out these programs it has been necessary to enter into more than 220 multilateral economic agreements, the varying nature of which ranges from joint capital investment ventures to specialization agreements, under the terms of which it is provided that Poland will be responsible for the production of certain kinds of equipment and component parts for the entire community.

The need to insure the complete and timely fulfillment of these agreements means that it is necessary to make them an integral part of the five-year plan both in terms of the assignment of tasks and also in terms of the allocation of funds. And this has to be accomplished in a comprehensive manner, i.e., in a manner that takes into account the impact of the completion of individual ventures on the level of industrial output, exports and imports, co-production imports from the capitalist countries, and essential capital investment outlays. To this end, and in conformity with directive no 5 of the chairman of the Planning Commission dated 7 February 1980, concerning the signing and extension of intergovernmental and interministerial contracts and agreements on economic cooperation between Poland and the CEMA member countries for the period 1981-1985 and beyond, the ministries have started work on compiling the relevant information that will be used in the draft five-year plan. In particular it is anticipated that capital projects playing a vital role in furtherance of this cooperation will be accounted for in an objective manner working within the constraints of the capital construction plan. This will make it possible to do a better job of providing for the internal coordination of the results and interrelationships of these ventures.

The decision to regard these ventures as an integral part of the five-year plan (and this is the first time this has ever happened in the history of economic planning in Poland) is a reflection of the process of the internationalization of our economy and of its growing ties with the economies of the other socialist countries.

The growing importance of comprehensive problem-solving programs is a characteristic feature of the changes that are being made in the five-year planning process, a feature which will be incorporated into the next five-year plan.

In contrast to the conventional forms of planning practices the comprehensive programs are distinguished above all by their problem-solving orientation, as opposed to the former subjective orientation, by the differing degree to which they address detailed issues in a manner that requires a given program to take into account all relevant tasks (including those which are of lesser importance on a macroeconomic scale, but which are still essential to the realization of the program's goals), and also by the detailing of tasks for all organs taking part in the program's realization, regardless of their hierarchical organizational relationships.

The classification of individual capital ventures according to the degree to which they complement each other and according to the degree to which they fit into the provisions of a given program, regardless of the hierarchical organizational affiliation of a given organ, will make it possible to give the plan a new problem-solving format alongside its economic (sector-by-sector and branch-by-branch) and subjective (ministry-by-ministry) formats. This will make it possible to forge the links between capital construction tasks that are needed in order to carry out individual programs, regardless of the hierarchical organizational affiliations of the individual program participants.

This means that some ministries playing a coordinating role in relation to individual programs will draw up their draft plan in two versions, i.e., one version encompassing its own participating organizational units and another version encompassing all of the various organizational entities that are participating in the realization of a given program.

At the present time it is anticipated that eight such comprehensive programs will be drawn up during the course of work on the draft five-year plan. These are: the program for the rationalization of energy, raw materials and fabricating materials consumption; the program for the promotion of export sales; the CEMA countries integration program; the housing construction program; the food program; the program for the comprehensive management of the Vistula River; the program for the development of small-scale industries and services in the public sector; and the health protection program.

Some of these problem-solving programs will have their counterparts in the form of appropriate voivodship programs which will be integral parts of the five-year plan at the voivodship level. It is anticipated that the voivodships will draw up comprehensive programs covering the development of the food industry, the housing industry, the development of small-scale manufacturing industries and services, health protection, and the management of the Vistula watershed (or, correspondingly, the Oder and Noteć watersheds and possibly waterworks).

It is also expected that the voivodships will draw up their own programs for the development of local raw materials sources and for environmental protection. Interministerial working teams will be appointed for the purpose of drafting each of the programs slated to be carried out at the central level. These working teams will be headed up by the portfolio ministers who will serve as coordinators

for the implementation of a given program. All ministries collaborating in the implementation of a given program will participate in the work of these teams.

The reinforcement of the problem-solving components of the five-year plan will go a long way toward fostering the plan's internal cohesiveness, the mutual coordination of individual ventures, and the balanced growth of the national economy.

The ministries that coordinate the implementation of individual programs, regardless of the material foundations that determine the dimensions and scope of the implementation of a given program during the course of the five-year plan, will at the same time have a say in shaping the foundations of national policies in a given area.

Drawing conclusions from the lessons that were learned during the 1970's, an effort will be made to provide for the more careful integration of the development policies of individual sectors and to make sure that these policies are consistent with and complementary to national policies. It is also expected that policy-making plans and proposals in various areas, e.g., in the areas of price policy, taxation and incomes policy, credit, finance, housing and land-use policies, social policy and so on, as drawn up by the individual ministries in their functional jurisdictions, will be submitted for special reviews and be subject to validation from the standpoint of their consistency with national policy.

The exigencies of environmental protection that are growing in pace with the progress being made in our country's industrial development make it necessary for us to incorporate new ideas into the five-year plan in the realm of regional and land-use planning. These new ideas will be aimed--for the most part--at strengthening the interrelationships and coordination of economic projects and their consequences within industry-wide and region-wide frameworks. This is after all a general trend that is observable in all of the socialist countries. The awareness of this trend is also strongly reflected in the July 1979 decisions of the CPSU Central Committee concerning the improvement of the planning system in the USSR.

It is of crucial importance in this regard that we study the impact of economic undertakings on the environment and on land-use practices. In order to conduct such studies it will be necessary to furnish a broader range of information to the voivodship authorities concerning the projects mandated by the central plan and slated to be carried out by organizations located in the jurisdictions of individual voivodships. The scarcity of this kind of information is now a generally recognized problem and it is also one of the causes of shortcomings in the lateral coordination of economic undertakings.

In order to rectify this situation it is expected that enterprises mandated to draw up draft five-year plans will be required for the first time to submit reports to the voivodship governors outlining the projects which they will be undertaking during the course of the five-year plan (in contrast to the past practice of submitting reports which only outline projects slated to be carried out during the course of a given year) with special reference to the need to furnish information on anticipated increases in the level of employment, water consumption and pollutant emissions, the demand for increased shipping facilities, changes in the management

and utilization of land resources, enterprise-sponsored housing construction, and so on. This ought to contribute to an improvement in this situation, especially inasmuch as it is anticipated that the voivodship governors will be given 6 weeks to draft an advisory opinion on the above problems. This should make it possible to do a better job than was done in the past in terms of the regional coordination of such programs, all the more so in that a five-year, as opposed to a one-year time frame is more conducive to dealing with this problem on a substantive basis. At the same time it is anticipated that an effort will be made to bolster the degree to which the five-year socioeconomic plan is integrated with regional and urban plans. The existing state of affairs with regard to the management of some sections of the country already argues in favor of the need to impose a ban in some regions, especially in our major urban centers, on the siting of new industrial plants, to curtail the unwarranted expansion of municipal jurisdictions, and so on.

At the same time the five-year plan must be given a stronger say in determining the priority and standards governing the development of residential public utility systems in order to curb the currently widespread practice marked by the over-extension of municipal capital budgets and urban services, a practice which contributes to major delays in the completion of these kinds of capital projects. This is why the next five-year plan, in contrast to the practice of previous five-year plans, should assign a more important role to regional planning agendas and land-use policies.

It has been proposed that budget programs that are tied to the provisions of the five-year socioeconomic plan be incorporated into the draft five-year plans of the voivodships. This proposed incorporation will go a long way toward fostering a more efficient budgeting policy. This is a new proposal which would be put into effect for the first time.

An important change in the five-year planning process at the voivodship level will take the form of the incorporation into the five-year socioeconomic plan ratified by the voivodship national councils--as a separate annex--of a voivodship land-use management plan that will be implemented on a staggered basis over a period of five years, i.e., within the same time frame as that of the socioeconomic plan.

This is an important change in relation to the present state of affairs which is characterized by the existence of a five-year socioeconomic plan that parallels a voivodship land-use management plan spanning a period of from 15 to 20 years. It stands to reason that these plans could not be coordinated with each other in a proper fashion, and this situation has been a bone of contention of a long time. The progress that was made during the 1970's in the drafting of voivodship land-use management plans now makes it possible to take a major step forward toward the integration of these two plans.

The main thrust of the phased implementation plan in contrast to the voivodship land-use management plans that span periods of from 15 to 10 years should consist in the setting up on the territory of a given voivodship--broken down according to population centers--of a substantive program based on the amount of capital investment funds allocated to a voivodship under the terms of the five-year plan. This is a key prerequisite that must be fulfilled in order to insure a realistic land-use plan and at the same time an efficient distribution of social and technical services.

The gearing of the five-year plan toward the disclosure and mobilization of untapped efficiency-boosting resources means that it is necessary to get scientific institutions and the entire research and development infrastructure involved on a much larger scale than heretofore in work on the drafting of the five-year plan.

How do we propose to go about resolving this problem? It is anticipated that an individual expert or a research and development organization appointed by the appropriate government minister will be enjoined to submit an advisory opinion on the draft plans prepared by enterprises.

When it comes to the draft plans of the associations it is expected that for associations designated by the appropriate ministers, with the consent of the chairman of the Planning Commission, advisory teams will be set up consisting of representatives of the ministries' research and development infrastructure, representatives of the central foreign and domestic trade organizations that market the goods produced by a given association, and representatives of co-producers, the banks, the Planning Commission and the minister of finance. It is likewise expected that the minister of science, higher education and technology will submit recommendations concerning the application of the most important results achieved by our scientific research workers and also that representatives of the Polish Academy of Sciences and social-professional organizations such as PTE [Polish Economic Society] and NOT [Chief Technical Organization] will be invited to participate in work on the drafting of the five-year plan.

A systematically developed system for evaluating the draft versions of the plan should come into play as a means of validating the technical and economic premises of the plan and disclosing untapped resources that could be put to work for the purpose of promoting greater efficiency.

The procedures employed in the drafting of the five-year plan for the period 1981-1985 are also unique in terms of their purely methodological aspects.

The plan will be drawn up in a manner that takes into account the new purchase prices (which will go into effect on 1 January 1981) which will do a much better job than the old prices of reflecting the real social costs of obtaining raw materials, energy and fabricating materials from domestic or foreign sources.

A much stronger emphasis than before is being attached to the need to base the plan on norms and standards, especially those that pertain to materials and labor intensiveness and to hiring practices.

Finally, it is anticipated that the draft plan will incorporate new and more refined yardsticks for measuring output and other kinds of economic performance, which will do a better job of reflecting the real contribution of an enterprise, organization or ministry to the generation of national income, i.e., these new yardsticks will be more closely related to net output figures.

This new approach, which is a product of current conditions and of changes in our economic strategy, will also come into play during the phase which follows the drawing up of the five-year plan, namely, the phase encompassing the plan's implementation.

In particular it seems as though it would be a good idea to call upon the KSR [Workers' Self-management Conference] to validate the draft plans submitted by the lower levels of the management hierarchy, all the way down to the enterprise level, and to endorse the enterprise five-year plans after the five-year plan has been ratified by the Sejm. This will contribute to the strengthening of the role played by self-management organs, and at the same time it will be tantamount to the acceptance of demands calling for the giving of more operational leeway to economic organizations and enterprises.

Similarly, it is planned that the voivodship national councils will draw up and ratify comprehensive socioeconomic development plans for their respective voivodships. Responding to the need for the closer integration of the socioeconomic planning process with the land-use planning process, it is being proposed that, during the 6-month period after the date on which the five-year plan is ratified, the land-use management plans of the voivodships should be subjected to a validation process in conjunction with the drawing up of implementation plans that are consistent with the provisions of the five-year socioeconomic plan.

Next, consideration is being given to the question of whether or not during the six-month period following the ratification of the five-year plan we should update all of the government's in-place long-range programs in conformity with the principle which holds that the five-year plan takes precedence over all other programs. This is entirely justified inasmuch as the five-year plan takes into account those conditions which are most current, conditions which by their very nature could not be taken into account at the time when these long-range programs were being drawn up. At the same time, the five-year plan spells out the degree to which it will be realistically feasible during the years that lie immediately ahead to take on new development tasks within the context of these long-range programs, and it is only in this light that it will be possible to assess the realism and cohesiveness of all of these programs in relation to the projects slated to be carried out during the period 1981-1985 and to provide for their overall coordination.

Consideration is also being given to the methodological and substantive problems associated with the formulation, on the basis of the ratified five-year plan, of a comprehensive economic development program spanning a 10-year period. The objective here is to lay the ground work for a smoother transition from the forthcoming five-year plan to the five-year plan which comes after that. To be sure, this would be a program that is focused mainly on the broadest aspects of the plan, and these aspects would not be fully elaborated. This idea amounts to a concession to demands that have been raised for a number of years now in this regard, and at the same time it is consistent with trends that have been observed in the planning system reforms recently carried out in other socialist countries, such as the USSR.

Considerable progress has already been made in our work aimed at the implementation of the changes in the five-year planning process as outlined above. There is every reason to believe that the new five-year plan will insure the fulfillment of the principal goals set forth at the Eighth Congress of the PZPR and that it will also serve as a plan of action for surmounting the difficulties which we are now experiencing. At all levels of the economy the planning service has an enormously important role to play in the realization of these goals which are critically important to the future of our country and to its development during the 1980's.

BANK OFFICIAL DISCUSSES HIGHER INTEREST RATES, OTHER SAVINGS INCENTIVES

Warsaw ZYCIE GOSPODARCZE in Polish No 48, 30 Nov 80 p 8

[Interview with Zdzislaw Pakula, vice president of the Polish National Bank, conducted by Deputy Managing Editor Jerzy Dzieciolowski: "Rich On the Poor People's Money"]

[Text] Jerzy Dzieciolowski: The proposal to raise the interest rate on savings accounts to a maximum of 8 percent...

Zdzislaw Pakula: ...not 8, but 9...

JD: ...well, let it be 9 then, though the saving deposit certificates on which interest is paid at that rate do not seem to me to be a form of savings enjoying great popularity--this proposal, then, has not met with a very favorable reception.

ZP: By whom?

JD: At least by the journalists at the government spokesman's conference.

ZP: You really are obsessed with that 8 percent.

JD: Do you believe that people will begin to bring money into the bank?

ZP: They are already bringing it in.

JD: Can you prove that?

ZP: In September, 800 million zlotys was withdrawn from the PKO [General Savings Bank] system. In October, 1.5 billion zlotys. In the first ten days of November, savings deposits increased by 147 million zlotys.

JD: In the first ten days of November, the new rules for the accumulation of savings had not yet been announced.

ZP: They had. The information was given on the "Today" show on television on 3 November, though without details.

JD: Do you agree that it does not make sense to save if the interest rate does not cover the rate of inflation?

ZP: We must clear up certain misconceptions. Everywhere in the world the level of the interest rate depends on the period for which the money is deposited in the bank. Current accounts, or accounts payable on demand, as a rule receive only low interest rates, and in some countries no interest at all is paid. On the other hand, the interest rate on long-term deposits should be identical with the rate of inflation.

JD: And you judge that this 9 percent is sufficient to cover the decline in the value of money?

ZP: We will know the rate of inflation once the results of the [cost of living] survey have been announced. At any rate we cannot determine it on the basis of the present price of potatoes.

JD: You said that in other countries the banks follow similar rules. May I ask for examples?

ZP: In Bulgaria, the interest paid on current accounts is 1 percent, in Hungary 2 percent, and likewise in the USSR and in Czechoslovakia; in the GDR it is 3.25 percent (on all types of deposits), and in Romania 3.5 percent. In our country it is 4 percent at present. Long-term deposits are paid 2 percent in Bulgaria, 3 percent in the USSR, 4 percent in Czechoslovakia, and a maximum of 5 percent in Romania and Hungary. We propose 9 percent. This is how the matter looks in some socialist countries.

JD: And in Yugoslavia?

ZP: In Yugoslavia deposits are paid from 2 to 10 percent.

JD: What interest rates are paid on savings in the countries of western Europe?

ZP: In Austria, the interest on current deposits is 5 percent, but this is conditional on the deposit remaining untouched for 3 months. One-year deposits have a rate of 6 percent and 3-year deposits are paid 8 percent. In the FRG similar rules apply: 3-month deposits--5 percent, 3-year deposits--6.5 percent, and 5-year deposits--9 percent. In France, 3-month deposits earn 7.5 percent and 5-year deposits 10 percent. In Sweden, 3-month deposits are paid at the rate of 9.25 percent, 10 year deposits at 10.5 percent and 3-year deposits at 11 percent. In Norway, no interest is paid on current deposits, 1-year accounts yield 5 percent, and 3-year accounts, 8 percent. The interest rate on loans granted by the banks, naturally, is correspondingly higher.

JD: How is the very high interest rate paid on current accounts deposits in Sweden to be explained?

ZP: The decisions of the banks are linked to the economic situation of the given country. In this sense matters are noncomparable and the data, which I cited, constitute a survey of the forms of interest rather than a model.

JD: To sum up, the Polish National Bank expects that the intended goal will be attained?

ZP: The interest rate is not the only, but only one of the instruments for encouraging savings behavior.

JD: What kind of increase in savings are you expecting in result of this?

ZP: The entire complex of measures to intensify savings should yield an increase exceeding 50 billion zlotys in 1981.

JD: I wonder whether this certitude of success derives from the experiences of the past?

ZP: I have been engaged in these matters at the Polish National Bank for 15 years. New forms of savings have always resulted in a certain impetus to the development of the habit of accumulating savings. I should like to note on this occasion that a myth has taken shape in Poland that it is the millionaires who determine the overall state of savings deposits. We have investigated this. In 1978, deposits larger than 1 million zlotys constituted 0.3 percent of the aggregate sum of deposits. The dominating share comes from deposits in the 10,000-20,000 and 20,000-50,000 zloty ranges. Let us state it openly: the 500 billion zlotys in the PKO branches and the cooperative banks are savings that have been scratched together. The savings banks in Poland have made themselves rich on the poor people's money. The millionaires do not interest me, because they will bring in their money in any case.

JD: In order to stimulate citizens to save, prepayments for automobiles are to be resumed from the beginning of the year. Do you not believe that instead of making new deposits, people will shift money from one set of accounts to another?

ZP: I always have to reckon with the possibility that a part of the funds for automobiles will stem from transfers within the bank. Especially in case of the first installment which, as provided in the proposal, is to constitute 50 percent of the present retail price of the car selected, in the case of implementation of the prepayments within the shortest period, i.e. by 1982. The following monthly installments will certainly come from new funds. We estimate--on the basis of positive experience with the prepayments for the Fiat 126p--that 30 percent will be funds transferred from one account to another and the remainder will be new deposits. I am not disturbed by the size of transfers. As a banker I am interested in the absolute increase.

JD: What influxes of funds do you expect?

ZP: Large sums. We consider that over the space of the next 3 years we will accumulate about 80 billion zlotys in the system of purpose-bound savings for automobiles.

JD: How many cars are to be sold under the prepayment system in 1982?

ZP: About 160,000. This will constitute about 90 percent of the deliveries of our industry for the domestic market.

JD: There are at present two proposals being considered for the acceptance of prepayments: the first holds that the sequence in the line-up at the bank window decides, and the other than the work place determines who is to receive a car from the prepayment system. What is your opinion on this matter?

ZP: At the moment I lean towards the second solution. What speaks for it, among other things, is the fact that at the work place they know who has a car and whether he deserves one. Obviously, for the bank it is better that the "allocation" should be implemented by the work place and that there be no all-out rush to the PKO counters. It is better that the entire operation not be crowded into a few days, which would make the work difficult. Prepayments through the work place, however, also have drawbacks. What is to be done with farmers, students and pensioners, who should have an equal chance to acquire a car? The bank counter gives everybody that chance, but on the other hand it makes it more difficult to control the propriety of the prepayments. After all, we cannot prevent people in possession of ready cash from opening several prepayment accounts for automobiles. We start out from the assumption that there should be only one account per family. But I am aware that the notion of a family does not take account of its size. Nor does a possible notation in the registration document of the fact of the purchase of a car under the prepayment scheme constitute a convincing solution.

JD: You stated that the first installment for a car obtainable in 1982 should amount to 50 percent of the retail price. Concretely, for a Fiat 126p it would be necessary to deposit about 70,000 zlotys. This would leave for the remaining monthly payments a total equivalent to the difference between the first installment and the price of the car at the time of delivery. It is assumed in this context that the prices for cars under the prepayment plan will be set at a level approximating that of the "accelerated delivery" prices. Don't you think that these prices should be differentiated--that is, prices not deviating much from the cost of production for the "dwarf" [Fiat 126p], as the popular car, as against "express delivery" prices for medium-size cars, considering that such luxury in a mass edition is at the present beyond our means and also that we are not prepared for universal individual motorization?

ZP: You said it.

JD: What else does the Polish National Bank intend to do, beyond raising the interest rate on deposits and prepayments (including prepayments for color television sets), to encourage the citizenry to deposit money in the bank?

ZP: We would like to organize systematic saving for single-family construction, to be more precise--to link saving with the credit allocation system.

JD: Single-family construction in the present form is a mockery of all common sense. Who gives someone getting tied up with building the guarantee that he will obtain a developed lot, and--in time--materials, that he will find contractors, that prices will not run away, and that he will not be suspected of shady dealings?

ZP: We are proposing the following: the candidate for single-family home ownership will start to save systematically, let us say 2,000 zlotys a month. After the accumulation of a sum, for example 300,000 zlotys, he will receive a loan as a customer of the bank of, for example, 400,000 zlotys. The saver would also receive a guarantee of obtaining a lot and the basic construction materials essential for construction of the building.

JD: What does the producer of construction materials or the Ministry of Construction say to this?

ZP: The ministry entered into an obligation to prepare lists of the required materials by the end of the year.

JD: This is encouraging information. Certainly, the Ministry for Administration, Local Economy and Environmental Protection has committed itself to execute by the end of the year an investigation of whether it holds developed lots. And seriously, if it is intended to construct 500,000 single-family houses in 1986-1990, and the bank wants to cooperate with the citizenry in financing this task, then we must have it in black and white that developed lots and all necessary building materials will be available. What is more, it must be demonstrated in practice that this is available. This is the basic condition for getting customers to deposit 2,000 zlotys of ready cash every month over many years.

ZP: These are the intentions of the Polish National Bank. Incidentally, the accumulated savings could be utilized precisely for the development of building lots and the financing of investments linked to the supply of the necessary materials.

JD: You referred to loans. Are any new measures envisaged in this respect?

ZP: In the letters we receive many people demand from us increases in the interest rate paid on savings deposits and reductions in the interest charged on loans. How is that to be done? The sources of the loans are the savings deposits. At the present, after the raising of the interest rate, we will pay 5 percent on the average. Banking costs to obtain, maintain and service savings deposits come to 1 percent. The costs of granting and servicing loans take another 1 percent. Five plus two equals seven. Hence all loans--e.g. to young couples or for private housing construction--at less than 7 percent are loans on which the state budget pays a subsidy.

JD: Where does the bank earn anything then?

ZP: From loans for installment purchases, on which interest is charged at 10 percent, and from cash loans, which occur only in a small volume and on which the interest is 12 percent. If we want to raise the interest paid on savings more, we must further increase the interest charged on loans. There is no other way.

JD: We thank you for this interview.

VIC
ESD: 2600

SHORTAGES OF INDUSTRIAL SUPPLIES FOR AGRICULTURE DISCUSSED

Warsaw CHLOPSKA DROGA in Polish 15 Oct 80 pp 1,3

[Article by Andrzej Jaruzelski]

[Text] The negative consequences of the lack of perspective in the economic process, which initially went unnoticed, now, after many years, have often become fully manifest. In this way, economic policy becomes the difficult art of creating the future; the decisions of former years have had an overwhelming influence on our present situation, and even the most skillful measures now can do little to change things. This reason, as well as the longer and longer lines in front of grocery stores, must engender doubts with regard to the effectiveness of our agricultural policy. The uncritical reports served up to us on television until recently concerning large expenditures for agriculture and the whole sector of the food economy intensify these doubts.

What, then, is the real reason for the queues in front of our stores—an agricultural policy that is in error, or the improper implementation of our agricultural policy?

As a warning for the future, and for the sake of truth, we must present facts which we know could not be revealed several months ago, although they are entirely from official sources. These facts show the implementation of our agricultural policy and its evaluation in a new light.

Let us look, then, at the implementation in recent years of the tasks laid out by the 15th Plenum of the PZPR Central Committee concerning the development of the food economy.

Intensive Agricultural Production?

Highly productive agriculture (and this is our goal) bases its production capabilities more and more on the means of production furnished by industry. Machinery, fertilizers and agents for plant protection are those factors which enable the harvesting of higher yields. Materials from the Eighth PZPR Congress indicate that from 1976 to 1980, larger deliveries of fertilizers were to guarantee a 50 percent increase in yields. A further increase—by one-third—was to result from an improvement in equipping farms with tractors and other farm machinery. This equipment was to enable the improved execution of agrotechnical measures and make possible the limitation of losses in harvests. Thus, the hope for increased yields lay with these most important means of production.

In light of this, how did industry deal with supplying these important means of production? There were no increases in deliveries of chemical fertilizers during any year of the current five-year plan. For example, in 1975, 8.1 kilograms of nitrogen/phosphorus/potassium (NPK) mixture per hectare was lacking, but in 1978 this insufficiency rose to 23.7 kilograms. By harvest time last year, there was a shortage of 18 kilograms per hectare, and this year's shortage will be even greater. Delays of investments in the chemical industry, power shutoffs and breakdowns in fertilizer processing plants have resulted in the failure to achieve the planned level of 250 kilograms per hectare of fertilizer for this five-year plan. We already know that we will not even reach even 200 kilograms per hectare. These shortages add up. The effect of the shortage of fertilizers over the five-year period as calculated at the present time is a reduction in harvests by approximately 10 million tons (including at least 3.5 million tons of grain).

The situation with regard to farm machinery the situation is even worse. From 1976 to 1980 there was a two-fold increase in their supply by comparison to the preceding five-year plan. This represented a real increase and not merely an increase in value. Unfortunately, in terms of value there is a shortage of machinery valued at more than 10 billion zlotys with reference to the fulfillment of the plan, and an honest count of the actual number of machines will show a significantly greater shortage. Thus, there are more machines on farms than there were, but many more are needed. The number of tractors, the most important farm machine, is 52,000 less than the plan target, despite supplementary imports, and this is due to the delays in the construction of the new Ursus plant. If we take into consideration the necessary scrapping of already worn out tractors, then this year for the first time there was a decline in the number of tractors per 100 hectares of arable land.

Resolutions of the Seventh Congress and the governmental decisions which they engendered have projected the production of 105,000 tractors in 1980, which is twice the number actually produced at the Ursus plant. Investment delays have caused a combined shortage of over 100,000 tractors. Agriculture was to receive 78,000 tractors of the total production planned for this year, and the rest was to be divided among other sectors of the national economy and export. Instead of exporting tractors we had to import them.

The shortage in deliveries of trucks is a similar case. There is also a shortage of trailer trucks. All of this reflects only a portion of the difficulties which have plagued farming in recent years. Poor supplies of tires, on which the production of such equipment depends, makes this situation significantly worse. The shortage of batteries immobilizes the production of tractors and combines. This year agriculture, which possesses 13 percent of the entire number of means of road transport in the whole economy, was to receive only 2.7 percent of the general number of tires. It will actually receive much less.

The tractive force standing at our disposal, i.e., the force per unit of surface area of arable lands, is of key significance to progress in agricultural technology. But there is not only a shortage of metric horsepower. The projected deliveries of grain combines, combines for harvesting root crops, lime spreaders and fertilizer spreaders, loaders, rotary mowers and the like were not made. Deliveries of other articles which affect both plant and animal farm production substantially

were also not fully implemented. In 1979, for example, agriculture was supplied with 2.24 million fewer tons of cement than planned, and 900,000 fewer tons of coal. By comparison to 1978, during which there was also a decline, deliveries of concentrated feed decreased.

Should It Shift for Itself?

Delays in industrial investments and sudden changes in the prices of imported raw materials for the production of fodder have had a negative effect on supplying agriculture with the important means of production. When a factory which supplies finished products to the market does not receive the needed raw materials or elements on time, then no one has any doubts who is to blame, why the plan is not fulfilled and at the same time why the "holes" which have been made are not quickly patched up. In the case of agriculture, however, it is believed that this sector should somehow shift for itself despite these shortages.

But reality brutally dispels this type of illusion. If the farmer does not have the resources, he does not achieve high yields. The program for the development of agriculture was resolved by the 15th Plenum of the PZPR Central Committee and approved by the Seventh Congress projected an increase in production, based on the assumption, of course, that the necessary means will be supplied. But the causes of our present food problems do not lie with agriculture.

There is much said about the fact that agriculture seriously encumbered our negative foreign trade balance with its imports. The fact is that since 1973 we have ceased being net exporters of foodstuffs and our sharply growing purchases of grain and fodder cost billions. However, it is quickly forgotten that nearly 30 years of agricultural-food exporting brought us enormous foreign exchange returns, and that for all intents and purposes our import expenditures have exceeded the value of our exports only since 1974. At the present time, our intensive reconstruction of industry based on foreign loans, which is occurring at the expense of insufficient investment in such areas as agriculture at home, has had to take on the burden of the development of export.

The fact that agricultural investments number among those which bring returns over a longer period of time than investments made, for example, for processing in industry, is a decisive factor in the distribution and procurement of the means of production development. Over a cycle of many years, particularly given the current shift of the economic situation on world markets, it is evident that this is not only a profitable way of earning foreign exchange monies (in the same way as raw materials investments such as mines are profitable), but it is also more realistic than exporting industrial products to make money, since these are becoming more and more difficult to place among foreign consignees. But food and raw materials still have the advantage that they are always profitable to sell, while the sale of finished products is becoming more and more difficult of late.

The Sluggish Construction of Ursus II

The expansion of the Ursus plant is an example of this. Licensed tractors from this plant were to cover domestic needs and guarantee exports. The substantial delay of this investment not only causes failure to fulfill planned deliveries for agriculture, but also requires supplementary importing of tractors, which are less serviceable than those manufactured in Poland.

Why did such substantial delays occur? Apparently the expansion of the Ursus plant from the beginning was plagued by bad luck and a lack of support from the central leadership. In the first place, although we have our own tested prototypes, nearly 3 years was spent on the decision about what type of tractor should be manufactured there. Not only did it take too long; but by the time a final decision was made amid the crush of other priorities, the priority of this most important endeavor with regard to agriculture had somewhat diminished. The funds and processing capabilities of producers had been dissipated to such a degree that it was impossible to maintain the tight schedules for the completion of work.

These typical "sins" of our construction industry--the enervation of our production potential and the lack of coordination of efforts in all sectors--have led to a situation in which even the completion of the Ursus factory on time would no longer produce the desired results. The tractors could not be assembled because scarcely 60 percent of the elements of a tractor are produced on the spot, and the rest are supplied by contractors. Above all the castings would be missing, since these are to be supplied by the Truck Factory in Lublin. The situation is no better with regard to other elements from the whole network of cooperating factories. Acceleration at one construction site, then, is not in a position to solve much unless it is coordinated with work at other plants.

These examples prompt several more general observations. It is evident that sometimes we know how to carry out our ambitious plans even though there are valid reservations with regard to the hierarchy of their importance (example: color televisions). We may seriously doubt whether such a means of food production as a tractor has found its proper place in this hierarchy of our needs.

It is no wonder, given such a situation, that our agricultural production has not grown in accordance with the plan and our expectations.

We would hope that the current changes and sharp cuts in the whole investments program will not affect industries employed in food production. The elimination of the disproportions in the economy, the costs of which we must now bear by paying a stiff price for the lack of coordination of the plans of development, will also affect, to a considerable degree, those plans which may finally bear fruit in larger deliveries of means for agriculture. Of course, we cannot expect this to happen today. We can only base a program for the present on a redistribution of what we already have. But we will return to this issue of some economic importance in another article.

POSITION OF AGRICULTURE IN POLISH ECONOMY ASSESSED

Warsaw POLITYKA in Polish No 43, 25 Oct 80 pp 1, 3

[Article by Leon Rzendowski]

[Text] Is agriculture really a weak link in our economy? Let us examine this matter not only from the position of a person standing in line in front of a meat store.

Our agriculture has attained an enormous potential. We have more arable farmland per inhabitant than Czechoslovakia and the GDR, almost as much as Denmark and four times as much as the Netherlands; we have more tractors per 100 hectares of arable farmland than any other socialist country (despite our large number of horses). We use less fertilizer per hectare of arable farmland than the Netherlands, the GDR, or Czechoslovakia, but we use more than Denmark, France, and Great Britain, and twice as much as Austria and Italy. We own almost 22 million head of livestock (the largest herd in Europe) and over 13 million head of cattle. In the current 10-year period, over 1.2 trillion zlotys has been earmarked for investment in agriculture and its supply base.

AN UNPRECEDENTED SITUATION

And, in spite of that, agriculture really represents a weak link in our economy. Why? First of all, because a country where almost one-third of the professionally active population is employed in agriculture, is not self-sufficient with regard to food. Since 1973 we have had a strongly negative balance of turnover in the field of agricultural and food industry products. Lately, the deficit has amounted to about 1 billion dollars a year. Indeed, there are well-developed countries which import food, but their farm population does not exceed several percent. Another reason, or proof, is the fact that as a result of labor productivity in agriculture being several times lower than, for example, in industry (this difference is increasing constantly), it is necessary to transfer for the benefit of agriculture a portion of the national income being produced in the other sectors of our economy. In the existing situation this is just and necessary; only a very narrow-minded person could regard the statement of this fact as a manifestation of "anti-peasant feelings." Likewise, one cannot examine this kind of phenomena from the standpoint of blaming the farmers or evaluating their really hard work. This, however, does not change the fact that the subsidies for food products, for agricultural supplies, and for amortization of bank credits granted to farmers, as well as grants for maintenance of the organization of agricultural extension

services, and for making up for the actual deficits of state farms and agricultural cooperative farms, will exceed 300 billion zlotys in 1980. This total does not include the 13 billion zlotys which are required for financing the payment of farm pensions in 1980.

There are debatable views that at least a part of these funds is represented by the financing of consumption and not of agriculture; but this does not alter the fact that from year to year this disadvantageous situation is getting worse and that these sums already consume almost one-third of the expenditures of the entire budget. To this we should add the changes in the ratio of the prices of farm products to those of industrial goods. In this field, Poland represents an unprecedented case not only in Europe but in the entire world. The so-called "price scissors" have always closed to the benefit of agriculture (with the exception of several years of temporary recessions) through the entire period of our postwar history, but this process has been running an especially stormy course since 1970.

From the FAO yearbook it follows that in 1977 the prices paid to the farmers increased in comparison with 1970 by 83 percent, while the prices of industrial goods bought by the farmers increased by 37 percent. As a result, the indicator of the ratio of the prices of farm products to those of industrial goods (100 in 1970) was 133.6 in 1977. (In the years 1978 and 1979, increases in the prices of farm products were even more rapid).

In very few countries of Europe did the price ratio change to the benefit of agriculture in that period. The greatest change occurred in Italy, but there the indicator of the ratio of agricultural and industrial prices was 110.1. In addition, tendencies favoring agriculture appeared, but to a lesser degree, in Greece, Belgium, Sweden, and Czechoslovakia. In all the other countries the price ratios changed to the disadvantage of agriculture. As an example, the same indicator is 90.5 for the Netherlands, 90.9 for the United Kingdom, 76.0 for Austria, 94.4 for Denmark, 81.0 for Finland, 94.8 for France, 93.6 for the FRG, 95.2 for Ireland, 84.6 for Switzerland, and 98.1 for Hungary. In the United States there is a similar tendency, and the indicator is 92.2. As we can see, the rate of cost increase in agricultural production in Poland is a record of its own.

MORE AND LESS

The slow increase in labor productivity (calculated by the value of pure production) has several causes but, first of all, it is a result of capital outlays increasing at a much faster pace than production. It was in 1968, that is, 11 years ago, that we achieved the highest pure farm production in our postwar history. In 1978 it was 14 percent lower. It is difficult to ascribe this situation solely to bad harvests; its causes are diverse and complex.

For example, we are classified in a group of countries where the effects of fertilizer application are the poorest and--what is more important--are constantly decreasing. In our country, it is necessary to use twice as much chemical fertilizer application, in order to achieve an equivalent of an increase of 100 kg in crop yields. To attain the above-mentioned increase in crop yields, it was necessary to use 17.9 more nitrogen-phosphorus-potassium in 1971-75 than in 1961-65, and 7.2 kg more than in 1966-70."

The utilization of our farm machinery is estimated at 60 percent.³ This probably occurs in part as a result of lack of many supplemental machines, of the often poor quality of machinery, and of the high rate of equipment failure. The worst feature is the high costs of operation which exceed annually 40 percent of the value of the equipment (over 100 billion zlotys). The cost of repairs (which are too frequent and of poor quality) goes as high as 25 percent of operating costs, and the value of deliveries of spare parts is--despite the frequent lack of these parts--65 percent of the value of new machinery.

Each hectare of arable farmland in Poland, because of the operating costs of the farm machinery alone, is encumbered by expenditures equal to the value of 10-12 cwt. of grain. This is three times as much as in countries with a much higher degree of mechanization,⁴ and, it is true, we still have almost 2 million horses. The largest reserves are hidden in the inefficient utilization of feed grains in the production of meat and other animal products. An important reason, though not the only one, is the inadequate albumen content of gross feed stocks. In recent years, the albumen content of a unit of oats in Poland was between 87 and 93 g, which equals 107-114 g per feed unit as used in the professional terminology of the Western countries. In the European Common Market countries, the albumen content of such a unit was 179 g in those years.⁵ Those countries generally already have in their feed supply base, proportionately, more albumen than our country does and, in addition, they import, percentage-wise, twice as much albumen feed as Poland, for example, has done in the past 4 years. It is probably one of the main reasons why in our country, in order to produce 1 kg of cattle on the hoof, we utilize up to 46 percent more feed units than is the average in the European Common Market and--this is a paradox--we prolong the fattening period; but, despite that, we use, all being said and done, 12 percent more albumen (which is in short supply) for the production of 1 kg of cattle on the hoof.

A longer fattening period means not only greater feed consumption per production unit, but also poorer utilization of stalls in livestock buildings.

Annually we slaughter 91-97 percent (only 83.7 percent in 1977) of the livestock population, according to the status in June, vs. 149 percent of the livestock population in the countries of the European Common Market. As a result, we obtain 77-84 kg of meat annually per statistical unit of livestock, vs. in the West--as a result of a faster rotation there--from 121.6 to 123.0 kg. As regards beef and veal, we obtain annually an average of 52.5 kg of beef and 4.3 kg of veal as calculated in statistical units of horned cattle, while in the West it is correspondingly 76.8 kg and 8.6 kg.

WHERE IS IT BETTER?

Probably one of the more important factors in the low labor productivity and the low effectiveness of outlays is the excessive fragmentation of our peasant economy. ours is one European country where farms up to 5 hectares constitute up to 25 percent of all the land owned by the peasants. However, is the socialized sector in agriculture, and particularly the state farm system, more effective?

Both the theoretical premises and the practical experience of many countries of the world prove the economic superiority of large farms (from the viewpoint of the production scale and not just the area) over small and inefficient ones. In

general (with the exception of the years 1976-1979), gross, and final production on state and co-operative farms increased more rapidly than on peasant farms. A reliable analysis requires not only the utilization of indicators of total and final production, but also of those of net production. Most frequently, the idea of the magnitude of agricultural production is related to final production which is expressed concretely in the physical tons of cattle on the hoof, grain, and other products which are sold or consumed on a farm. On the other hand, net production is an abstract concept, but the only proper one by which to determine the value of newly added production in the process. It alone constitutes the real contribution to the national income and can be used for proper assessment of labor productivity and management efficiency.

Unfortunately, not only in publications, but also in statistical sources, information about net production in agriculture is omitted. In the 1978 "Yearbook of Statistics of Agriculture and Food Economy," one can find data on this subject, but broken down only into the socialized and nonsocialized economy, without itemization of state farms, production cooperatives, and agricultural communes.

Table 1 shows the value of gross, net final, and net production per 1 hectare of arable farmland in 1976 (the last data available). As we can see, the gross and final production in the socialized economy is higher than in the private economy. However, the net final production is lower, and the net production is almost three times lower than on private farms. (It is two times lower on state farms).

In 1976, net production represented only 12 percent of the gross production in the socialized economy, and it was 35.8 percent in the private economy (Table 2). For every zloty of net production, it is necessary to make capital outlays worth 2 zloty 32 groszy (together with amortization), which includes purchase outlays of 4 zloty 12 groszy. On the other hand, in the private economy, per zloty of net production analogous outlays are 1 zloty 80 groszy, including 53 gr. of purchase outlays. It is difficult to explain the fact that for more than 10 years the situation not only has not improved but, on the contrary, one can speak of an increase of symptoms which are unfavorable to socialized economy. In the socialized sector of agriculture net production per hectare of arable farmland amounted in 1977 to 80.5 percent of 1970 production, and only 56.6 percent of 1960 net production. On the other hand, the net production per hectare of arable farmland on private farm in 1977 increased, in relation to 1970, by 7.1 percent and increased 24.2 percent in relation to 1960.

This picture is relevant not only to a comparison of the results of the unfavorable year 1977. The average 1971-1975 net production per hectare of arable farmland represents in the socialized economy 88.6 percent of the 1961-1965, and, respectively, 119.6 percent in the private economy. One should remember, however, that the indicators of the socialized sector are adversely and disastrously affected by the production results of agricultural communes which operate under difficult conditions, often on scattered parcels of land.

This is confirmed by the data on the cost of purchasing materials and services for production purposes, on the magnitude of agricultural production thus obtained per hectare of arable farmland, as well as on the cost of purchasing materials and services as calculated in 1,000 zlotys of final production on various types of farms.

As the years go by, there is a constant increase in the cost of purchasing materials and services for all types of farms (this occurring most rapidly on agricultural commune farms and in production cooperatives). On agricultural commune farms (not including the cost of labor, general costs, and amortization) they exceed considerably the value of the production--there, net production loses money.

BOOKKEEPING MISUNDERSTANDINGS

It seems quite irrational that not only the net production per hectare of arable farmland, but also the labor productivity as measured by the net production, is lower in the socialized sector than in the fragmented, more poorly endowed, peasant economy. It is possible to calculate that in 1976 the net production (at 1971 prices), when calculated per capita of a "fully employed" person, was 17,500 zlotys in the socialized economy, and 26,107 zlotys in private economy.

If we compare the labor productivity in 1971-1975 with that in 1960-1965, we see that in the socialized sector it is decreased 25 percent, while increasing 20 percent in the peasant economy. And yet in that economy the labor force (as calculated in "fully employed" persons) consists largely of women who are as much occupied with households, of persons holding two jobs, of juveniles, and of people who are past production age.

The causes of such a state of affairs are complex, and to analyze them is beyond the scope of this article. Of course, there exist model and productive state and cooperative farms, and low efficiency certainly is not a permanent characteristic of the socialized economy in agriculture. However, in only too many cases we can notice poor and careless soil cultivation (when there is a lack of herbicides, the plantations become overgrown with weeds), improper scheduling of agricultural engineering operations, waste of farmyard manures, improper application of chemical fertilizer (the dosage of nitrogen-phosphorus-potassium per hectare is twice as large as in the peasant economy), costly operation of machinery, and too rapid scrapping of machinery and equipment. The largest reserves are hidden in the inefficient feeding of fodder (particularly concentrated fodder), in the storage practices, as well as in the state of health of the animals (falls, infertility). Investment construction is costly and often faulty. The list of shortcomings is very long, their common characteristic being poor management.

FINAL PRODUCTION is calculated by subtracting from the value of gross production such outlays as the value of the indispensable fodder, seeds, etc. The final net production is obtained by subtracting additionally the value of the utilized means of production of agricultural origin, purchased from the outside. The net production is calculated through subtracting the remaining outlays and cost of material services as well as of the amortization of fixed assets.

Of course, the system of administration exerts, by and large, an influence on the results of production. Without overestimating its importance, it is necessary, however, to mention at least briefly the economic and financial system which is related to it. Because one cannot understand how it has been able to persist for so long despite its obvious faults. In 1957, within the scope of a successive reorganization of the state farm system, bookkeeping was reformed and recordkeeping was considerably "simplified". In 1971, concentration of enterprises was initiated (combined large farms), and the self-financing system of accounts settlements between enterprises was abolished.

Recordkeeping and bookkeeping have assumed forms which have made them useless for the purposes of economic analysis. Above all, there is a lack of full quantitative and value-oriented records of outlays related to some definite production. The records include jointly agricultural industry, processing services, and production. There is no possibility of determining the financial result of separate kinds of activity and of comparing income and expenditures. There is no possibility of an economic assessment of the activity of worker brigades, specialized farms, and individual farms. Every increase in production, even with incommensurable outlays, can pay off, because the cost is financed finally by the state budget. The value of net final production has become the measuring standard for the activity of the state farm system. On its size depended the amount of the budget subsidy and, indirectly, through the so-called financial result, the bonus fund of the factory work force.

Therefore, to the value of net final production are added the equalizing subsidies for seed production, for the production of concentrated fodder mixes, for milk and cottage cheeses, and for services and cooperation. Only from the amount thus obtained of especially calculated "final production", are budget subsidies calculated. These have been increasing constantly, and since the last adjustment in 1973 they have amounted to 49 percent of the final production thus calculated. It is also necessary to emphasize that the production is calculated at current prices, which also increases the cost of subsidies, and the so-called "financial result" is calculated as the difference between the income from the sale of production and services, augmented by earmarked subsidies, and the production costs. The work force's bonus fund depends on the financial result.

As seen from the above, for many years there was, practically speaking, no real motivation to lower production costs and to increase overall efficiency. Too frequent reorganizations have their bad aspects, as is known. But a change in the economic and financial system (as well as bookkeeping and recordkeeping) on state farms seems to be absolutely necessary.

PROBLEMS FOR DISCUSSION

Beyond any doubt the least expensive way to attain an increase in agricultural production is through creation of proper conditions for the peasant economy. But, despite that, one nevertheless needs to keep in mind that no individual users will be found for a portion of the farm land (because of retirement of farmers and the flight from farming to other occupations).

This does not change the fact that the existing resources can be used most efficiently on specialized farms and on so-called developmental farms, and therefore the ones which are most prosperous and produce accordingly. One should remember, however, that the costly and complicated gamut of privileges (even the interested persons themselves often are no longer familiar with it) in the form of various tax credits, amortizable and low-interest loans, subsidies, allotment of machinery and materials, used in order to stimulate production on these farms, nevertheless brings secondary results by increasing the differentiation of the property status and the income of the rural area. This cannot be disregarded. The limited (for the time being) utilization of hired labor on the most prosperous farms should not hide a fact which can become a serious social problem in the future.

Table 1

	197 stable prices			
	Gross	Final	Final	Net
	Production	Production	Production	Production
in zlotys per 1 hectare of arable farm land in 1976				
socialized economy	21,227	14,890	8,717	2,552
non-socialized economy	20,743	12,214	10,538	7,414

Table 2

	Cost of purchasing materials and services	Final production	Cost of purchasing materials and services per 1000 zlotys of final production
	per 1 hectare of arable farm land		
Total	3,889	12,690	417
Socialized economy	10,505	14,890	706
State farms	9,135	14,375	635
of these, under the administration of the Ministry of Agriculture	8,735	13,471	648
Production cooperatives	15,205	20,315	748
Agricultural communes	18,724	13,793	1,358
Private farms	3,901	12,214	319

The labor productivity (measured by the net production) on the less prosperous farms (approximately 20-25 percent of the total) is probably at least 15 times lower than on the most prosperous ones (5 percent of the total). The prices paid to producers must be high enough to provide even those least prosperous farmers with a subsistence and at least rebuilding. For this reason, the most prosperous farms, by virtue of not only more qualified work, but rather by virtue of possessing the "capital" (i.e., land, buildings, livestock, etc.) and because of their large production scale, produce a kind of fixed payment which is made by our whole society. Stimulation of production on prosperous farms must be accompanied by prevention of the decline of small and poorly prospering farms. In practice, our economic policy must take into account various aspects of all these difficult problems which I have barely sketched and certainly not exhausted.

One thing is certain: we need a broad discussion analyzing all the shortcomings of our agriculture and ways of improving it, particularly its socialized sector.

The most important conclusion which I have tried to justify is that it is absolutely necessary to work out ways of improving the existing situation and provide conditions for their greater effectiveness, parallel and together with efforts to increase the quantity and better quality of the means of production.

From the Editor: The article was prepared for publication in February of this year, but for reasons beyond the editor's control it did not appear then.

FOOTNOTES

1. For broader treatment of this topic, see WIES I ROLNICTWO no 3, 1979, "Effectiveness of Agricultural Production in Poland."

2. ZYCIE GOSPODARCZE no 34/1979, F. Kapuscinski, "Too Small Outlays or Effects?"

3. R. Patara and W. Zaremba, ZYCIE GOSPODARCZE no 4/1980, "Mounting a Harvester with a Diploma."

4. Based on ZYCIE GOSPODARCZE no 1/1980 J. Makowiecki, "On a Tractor and Under a Tractor."

5. "Annuaire de statistique agricole Eurostat," 1976 and 1977.

AGRICULTURAL DIRECTIONS IN CENTRAL COAL REGION EXAMINED

Warsaw NOWE ROLNICTWO in Polish No 3, 1-15 Feb 80 pp 1-3

[Article by Master of Engineering Stanislaw Dzygadło: "Directions of Agricultural Development in Central Coal Region Area"]

[Text] The work on a study entitled: "Directions of Progress in Agriculture and Forestry in Central Coal Region" was completed in 1978, in the Bureau of Territorial Planning in Lublin. The fundamental purpose of this study is to determine the future (i.e. until 1990) developmental directions for agriculture and forestry in the Central Coal Region (CRW) of the Lublin Coal Basin (LZW). This study constitutes the initial material for work on the spatial economy plan of CRW, and additionally it contains a spatial economy plan for the gmina [rural parishes] which comprise this region.

The CRW region includes 11 gmina, of which 8 belong to the Lublin voivodship: Ludwin, Małgiew, Milejów, Piaski, Puchezów, Spiczyn, Trawniki, as well as the gmina and town of Leczyca. Three gmina belong to the Chełm voivodship: Cyców, Siedliszcze and Wierzbica. The area encompassed by the study has a surface of 1,281.9 square kilometers, this comprises 27.7 percent of the planned agglomeration area of Lublin and the LZW. At present, agriculture is the principal function of the area on which had begun the construction of the CRW. A large portion of this terrain, i.e. 67 percent, is included in the land reclamation system of the Wieprz-Krzna canal.

In accordance with the realization assumptions of the CRW, agriculture and mining will remain equal partners in the national economy. However, one has to consider the fact that it will be impossible to totally avoid the negative influence of mining exploitation on agricultural production areas. This will be the direct result of rock settling following exploitation of successive coal seams. This in turn will cause surface deformation and a change in water ratios.

There are, however, reasons to state that this process will not become very intense until after 1990. Instead, in the course of CRW construction structural changes will occur in agriculture. These changes will result from the new spatial utilization of terrain, i.e. changes in the highway net, construction of new residential units, profound changes in the demographic situation, etc.

The study performed by the Bureau of Territorial Planning is the first attempt to adapt to agricultural development the consequences of the resultant changes. One of the major changes will be the creation of a new urban complex in the region of the central Wiepra tributary. This will create a new and ready sales outlet for certain agricultural products (early vegetables, field vegetables, fruits, dairy products, etc).

It is being assumed that the total population of the CRW area will grow from 85,000 (in 1975) to 92,000-150,000 in the future (depending on the pace of mining investments).

In agricultural economy the principal direction of future changes will be:

- reconstruction of agrarian structure,
- a gradual sociotechnological agricultural reconstruction,
- development of production specialization.

In the forestry economy, a need will develop to reevaluate the main functions of the forest, from productive to protective and social. This will occur over some very significant areas.

The soil structure of the CRW is very differentiated. In the western part dominate podsol soils, brown acidic and exhausted, also brown suitable and loessial soils as well as loessial like formations. In the eastern part limestone soils are partially evident (15-30 percent of the surface). The remainder of the region contains exhausted podsol soils and brown soils on loose sand and weak argillaceous soils.

There are 50.3 percent of class I - III soils, 35.3 percent of class IV, 14.2 percent of class V - VI and VII soils. It is therefore an area characterized by very good soil. In accordance with a directive from the Council of Ministers, dated 9 September 1977, gmina Leczna, Melgiew, Milejow, Piaski, Puchaczow, Spiczyn and Trawniki were included in a region of intensive agricultural development. Consequently, a very difficult task lies before the urban planners who concern themselves with organizing the economy on a territorial basis. Development of a coal basin, industry, new residential units and related technical infrastructure will cause losses of territory for agricultural usage. It is estimated that within the planned area the acreage of crop lands (in the CRW) will be reduced by 4.3 percent i.e. 5,470 hectares. The development, or actually the construction of the Leczna-Bialka-Zawadow urban-industrial complex will necessitate the exclusion from agricultural production of 4,530 hectares, including 1,750 hectares of class I-III quality rating of agricultural soils.

The urban inventory which was conducted in 1976, among 4,073 farms, located in 55 selected villages (on the territories of gmina Ludwin, Leczna, Milejow, Puchaczow and Spiczyn), by the Environmental Development Institute in Warsaw--Independent Environmental Development Workshop in Lublin, had indicated a low degree of investments. The value of buildings and investments calculated per farm was 387,000 zlotys, calculated per 1 hectare of arable land: 124,000 zlotys. Forty-three percent of permanent buildings were in good technical

condition. Investment buildings in the CRW area, in predominant measure, show low utilization value. They are not suitable for the development of specialized production, they are not multifunctional, they do not have installations for movement of fodder or removal of manure, and they have no running water.

In addition, private farming is characterized by a great degree of dispersal. There were 25.9 percent of farmsteads under 2 hectares, 40.5 percent of an average of 2-5 hectares, 16.9 percent of 4-7 hectares and 16.9 percent of 7-10 hectares and larger.

Among all the individual farms 4,957 (i.e. 20.4 percent) were operated by owners who were over 60 years of age and had no heirs. They worked 22,130 hectares of arable land which comprises 22.7 percent of land remaining under the management of private farmers. In the private farmers group 6,090 persons (i.e. 25.1 percent of the total) are holding down two jobs.

Based on the indicated soil conditions, the state of investment in private farming and the demographic situation we will discuss the assumed directions of agricultural development in the CRW area.

In 1975, the arable land area was 103,300 hectares, i.e. 80.8 percent of the total CRW area. Included were: arable lands--63.3 percent; orchards--1.4 percent; and grasslands--15.9 percent.

It is anticipated that the participation of the socialized sector in the structure of land cultivation will be increased from 5.4 percent (in 1975) to 35.0 percent in 1990.

Presently, within the area included in the study, the following socialized enterprises were evident: Horticultural Works in Leonow (this includes two socialized farms in Leczna and Lysolajce), State Farm (PGR) in Sawin (including socialized farms Mogielnica Gonina Siedliszcze) and Wolka Tarnowska Gonina Wierzbica, The Academy of Agriculture in Lublin--Agricultural Experimental Institute in Bezk Gonina Siedliszcze. Additionally there are seven production cooperatives: Swiecie, Pniowo Gonina Wierzbica, Kaminonka Gonina Siedliszcze, Lancuchow Gonina Milejow, Spiczyn Gonina Spiczyn, Gardzienice and Brzezice Gonina Piaski. Arable lands which belong to Agricultural Circles consist of small and dispersed acreages.

It is further being assumed that the growth of socialization in agriculture will result in a decrease of employment in the total rural economy by 35 percent as compared to 1975. This will add up to 24,400 persons (37,510 in 1975) or as calculated per 100 hectares of arable land--19.2 persons.

The stipulated development of services and introduction of heavy equipment will result in an increase in employment of up to 2,000 persons, this calculated per 100 hectares of arable land, in private farming--3.1 persons.

The projected need for a labor force in private farming is estimated at 15,460 persons, calculated per 100 hectares of arable land it amounts to 24.1 persons, with a reduced employment norm per single farm from 1.5 down to 1.2 persons.

The production tasks for 1976-1990's in the CRW region will be realized under difficult conditions because of forecasted changes in the structure of ownership and accelerated migration of people (principally males) from agriculture to nonagricultural occupations.

Until 1990 the dominant role in agricultural production will be performed by private farming. It is anticipated that of the 12,900 individual farms which will remain until 1990, (presently there are 24,255)--60 percent will be specialized farms, either individually worked or organized into common production enterprises engaged in livestock or crop production.

The following specialization was assumed to occur relative to spatial distribution: In the rural communes located in the Wieprz-Krzna canal area, i.e. Ludwin, Milejow, Trawniki, Cycow, Siedliszcze and Wierzbica the leading objective will be cattle breeding. In Gonina Malgiew two production objects will be developed: cattle breeding and commercial crop farming. In Gonina Leczna and Gonina Piaski the cultivation of commercial crops will be dominant, however, in Gonina Puchaczow the emphasis will be on multifaceted production.

In the CRW region the farming cooperatives will specialize mainly in production of broiler chickens, milkcows, and pork and beef slaughter animals. State farming enterprises located in Gonina Cycow, Siedliszcze and Wierzbica will develop production of milk and beef. Horticultural Works in Leonow will be engaged mainly in production of fruits and vegetables, in particular greenhouse grown early vegetables.

In 1977, the minister of mining established a farming enterprise named Agricultural-Breeding Plant which was headquartered in Puchaczow. Presently the plant has 466 hectares of arable land and the Rogozno Lake with a surface of 53 hectares in Gonina Ludwin. Projected size of the plant--1,000 hectares; specialization: production of pork and beef slaughter animals.

On the other hand the private farming sector will develop to serve the needs of the market: Milk production (proportion of cows in general cattle count was 52.9 percent and in state farming 14.6 percent), broilers (in particular ducks and geese), field vegetables, edible potatoes, greenhouse vegetables and fruits.

Three hundred and fifteen groups in private farming will be engaged in joint breeding of milk cattle, 70--in fattening of pigs, 80--in raising of sheep, 65--in production of broilers (chicken, geese and ducks). In addition 5,700 specialized farms will be organized of which 4,560 will conduct specialized animal production.

A perspective outlook to 1990, assumes that:

1. The following increases in crop acreage:

corn	from	2,200 hectares	to	3,700 hectares
wheat	from	2,340 hectares	to	4,100 hectares
barley	from	2,410 hectares	to	3,800 hectares
potatoes	from	18,600 hectares	to	26,300 hectares
sugar beet	from	38,600 hectares	to	40,000 hectares

2. An increase in orchard acreage by 1,034 hectares, i.e. by 57 percent as compared to 1975, field vegetables by 64 percent and strawberries by 40 percent (up to 1,330 hectares).

It should be mentioned that the CRW region is one of the strawberry production centers. Cultivation of strawberries will be concentrated in Gonina Cycow and Siedliszcze--each 400 hectares; Leczna--350 hectares; Ludwin--290 hectares and Spiczyn--260 hectares.

Additional firm changes in the production of field vegetables will occur the moment that the Horticultural Works in Leonow organizes, in the territory of village Dorochnicza (Gonina Trawniki), a farm which will develop growing of vegetables on peat. It is estimated that in area the Horticultural Works can take over some 700-800 hectares of arable land.

Also assumed was a considerable increase in vegetable production in greenhouses--the greenhouse area will be increased to 8.7 hectares, and plastic hothouse enclosures to 5.1 hectares. In comparison to 1975, the area of vegetable cultivation under glass will be increased almost six-fold, and in plastic enclosures 13-fold. Nevertheless, this will not satisfy the requirements of the area under discussion.

The market demand for fresh vegetables in the CRW region and the Lublin metropolitan area will also be met by the Horticultural Works in Leonow--the area of vegetable cultivation in Leonow will be enlarged to 16.5 hectares and the production to 2,500 tons.

In order to insure that the planned harvest is achieved the dosages of mineral fertilizers should be increased from 139 kg of NPK (nitrogen, phosphorus and potassium) per hectare of arable land to 300 kg, and calcium (lime) from 78 kg to CaO to 270 kg per hectare of arable land.

In animal production it is anticipated that the density of farm animals as calculated per 100 hectares of arable land will be increased:

cattle	from	66.8 head	to	112.0 head
in this cows	from	34.0 head	to	57.0 head
hogs	from	91.1 head	to	150.0 head
sheep	from	5.9 head	to	16.0 head

It is being assumed that the market production of slaughter animals should increase from 16,600 tons to 31,600 tons, i.e. by 90.4 percent; along with broiler production: chickens, 1,016.3 tons to 3,190 tons (i.e. threefold), ducks from 473.8 tons to 761 tons (by 60.6 percent), geese from 115 tons to 220 tons (by 91.3 percent). Market production of milk from 41 million liters to 120 million liters (i.e. almost threefold) and eggs from 25.3 million to 39 million (i.e. by 54 percent) as compared to 1975.

Fish farming in the CRW region has limited possibilities of development. The usable surface of ponds will be increased to 40 hectares and that of lakes to

467 hectares. This will permit production of 115 tons of fish in 1990, inclusive of 40 tons harvested from ponds.

It is worthwhile, at this time, to discuss the availability of the means of production in agriculture: The number of tractors should be increased to 2,640-3,300 units, this will reduce the number of arable land units per nominal tractor down to 25-20 hectares (as compared to 64.1 hectares in 1975); the number of grain harvest combines will increase from 41 to 230, potato harvest combines from 4 to 200, sugar beet harvesters from 1 to 150, hay combines and rotary mowers from 57 to 160. Those needs were established based on norms for the particular machines which are binding on a state farm (PCR). Additionally, the number of trucks for the needs of agriculture should be increased by 180, vans (delivery trucks) to 50 and freight trailers to 5-6,500 units.

The agricultural technical service will be assured by an integrated net of repair workshops. An integrated net includes workshops on four levels, namely: Association of Technical Agricultural Services in Lublin, Association of State Farms in Lublin, Voivodship Association of Agricultural Circles in Lublin and in Chelm and the Voivodship Association of Agricultural Cooperatives in Lublin and in Chelm.

Within the framework of a net we differentiate between regional service stations (one per gmina), service conservation stations and service conservation points. The size of a particular shop will be determined by the extent of the service (i.e. the number of machines and the size of the area).

The planned development of agriculture for the 1976-1990 period requires an increase in investment expenditures in socialized farming, on the order of 6.56 billion zlotys. The largest investment requirements will be in: Management of arable lands taken over by state farms, drainage, mechanization, insuring a supply of water to the villages, the organization of Agricultural-Animal Husbandry Works in Puchaczow and vegetable gardening on peat. In order to assure a proper development of the private farming sector, the Bank of the Food Economy should insure an investment credit amounting to 6.427 billion zlotys. The main direction of investments will be in investment building construction, purchases of machinery and construction of individual farm water supplies.

Forestry--The forests comprise 12,400 hectares or 9.6 percent of the CRW region. This makes it a small forestation percentage. Forests in excess of 10 percent of the area can be found in Gmina Puchaczow--10.7 percent, Ludwin--13.5 percent, Milejow--14.2 percent, Melgiew--14.9 percent and Spiczyn--20.6 percent. The smallest forestation is to be found in Gmina Siedliszcze--3.1 percent and Lecana--3.2 percent of total surface area.

State-owned forests comprise 80 percent of the surface. The largest complex of state-owned forests is located on the territory of Gmina Wierzbica--82 percent of the total forest area.

The soils, despite high fertility, because of prevailing climatic conditions do not become forestation centers of high productivity. Small levels of

atmospheric precipitation, low capability of terrain to retain water, a large yearly temperature amplitude and the influence of dry winds result in that this terrain is one of the poorest in the nation in water contents and is also distinguished by a marked degree of continental climate. These climatic conditions limit the extent of growth of certain types of forest trees. This terrain is completely devoid of fir and beech trees and partially devoid of spruce, lime and sycamore.

The planned dynamic socioeconomic development of the CRW region will result in a tremendous increase in the demand for economic and extraeconomic forest functions. The need to fulfill these functions levies a two-sided problem on the forest administration. On one hand there are high production tasks, on the other hand these tasks impose requirements for a simultaneous reevaluation of the main functions of the forest: from production to conservation and social--and all this on a very large scale.

If we accept the classification and nomenclature which is used in the forest industry we can differentiate the following groups of forests:

--landscape conserving forests which total 5,700 hectares;

--rest and recreation designated forest areas as indicated in following forests: Milejowski Forest near Chiechnek and on the shores of Lake Piasieczno--together about 250 hectares. The principal CRW recreation areas are located outside the boundaries of this study--in the Leczynsko-Wlodawski Lakes region.

--commercial forests which extend over approximately 6,640 hectares.

There is one botanical sanctuary located within the area of this study: The Brzeziczno Water-Peat Reservation with a surface of 81.67 hectares including a forest of some 50 hectares (Gonina Ludwin). Standing timber resources are estimated at about 920,000 cubic meters. Potential capability of state-owned forests is evaluated at 3.5 cubic meters of growth per hectare per year--in private forests this figure is 1.5 cubic meters.

Despite the fact that the anticipated mining damages will not occur until after 1990, it is necessary that appropriate views and conclusions be formulated at the present time. The authors of the mining management policy for the LZW are stipulating coal excavation by the roof-cut method. They assume that this system, taking into account the great depth of the coal deposits and the relatively thin seams in which it occurs, should not--to any considerable degree--have any negative impact on the surface during the initial phases of the exploitation.

The LZW region, from a geological formation point of view, does not have a corresponding area in the Polish coal basins. This makes it impossible to formulate any conclusions based on an analogy as to the behavior of the upper earth layers.

Nevertheless, the underground exploitation of deposits will disturb the hydrogeological equilibrium. In case of a linkage of water levels, by breaking through the isolating layers, and subsequent underground drainage, the phenomenon of drying watercourses may occur, as well as disappearance of water from the water table and an excessive drying of soils.

The matter becomes even more serious when one takes into account the possibility that a marked reduction of the initial potential for provision of water may be the consequence of the exploitation of hard coal.

The tectonic dislocations can result not only in a new drainage structure for surface waters, but they can also create profound changes in heretofore existing waterheads and watercourses.

The projected (until 1990) plan for the development of agriculture in the CRW region, in light of the indicated hydrogeological problems, leads to the following conclusions:

1. The exploitation of coal by the roof-cut method may cause damage in the form of drying up of watercourses, disappearance of waters and excessive drying of soils. In connection with this one must contemplate the necessity of construction of new water intakes in order to preserve the stability of water ratios. At the present time this problem is difficult to plan for.
2. A listing of presently exploited water intakes is indispensable. In the future this will provide a basis of comparison for indicated water conditions. Also pertinent is designation of new monitoring stations in both the completed and projected drillings.
3. It becomes necessary for the IKS [expansion unknown] to establish monitoring stations for surface and underground waters and observation fields for monitoring of arable lands. These will permit collection of data relative to the status of surface waters (level and direction of flow) and moisture contents of soils with an emphasis on their influence on harvest yields.
4. The anticipated changes in the hydrogeological system make it necessary to launch specific studies to include:
 - an analysis of the influence of mining activities on water conditions;
 - programming of changes in hydrogeological systems as a result of underground drainage of waterbearing levels;
 - determination of underground water dynamics.

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RURAL COAL SHORTAGE AFFECTS LIVESTOCK PRODUCTION

Warsaw DZIENNIK LUDOWY in Polish 14 Nov 80 pp 1, 4

[Article by four correspondents: "Rural Areas Need More Coal"]

[Text] Rural areas were to receive almost a million more tons of coal this fall than was provided for in the delivery plan. However, this government decision in a matter of such great importance to the population did not bring completely satisfactory results. Country residents are still experiencing a severe fuel shortage. It is cold already, but many homes have nothing to heat with.

According to our correspondents, fuel deliveries to the people are encountering great difficulties. Transport arrivals are irregular and the quantities are smaller than planned. Meanwhile, the plan in any case provides for less than is actually needed. In some areas people are attempting to overcome the fuel shortage by using trees from the forest. That may help, but it does not solve the problem.

Under these conditions, lines are forming in front of the Gmina Cooperative coal warehouses. Selling is made extremely difficult and occurs in an atmosphere of general dissatisfaction with the delivery process.

Coal is needed in rural areas for purposes other than home heating. It is a basic component of agricultural production, especially livestock. Without sufficient coal there cannot be sufficient supplies of animal products. A solution to this problem is at present one of the most urgent economic and social tasks.

Every Third Gmina Empty

Coal delivery to the Bydgoszcz rural areas is very unsatisfactory. At present there is not a lump of coal in nine gmina in that province. This zero condition exists in Dabrowa Chelminska, Koronowo, Mogilno, Pakosc, Rogowo, Sadki, Sicienko, Strzelno and Slivice. In 18 other gmina minimal quantities are available for rural trade.

Shortages in deliveries to livestock purchasing centers have reached 10,000 tons. This represents constant difficulties for farmers, as coal is one of

their basic and indispensable production materials. The most difficult situation exists in the highly-productive Kujaw and Pomorze regions.

Emilia Kedra

No Change in Years

Sale of coal in the Lodz City Province in the past 10 months of this year was higher than in the same period last year. At the end of October and the beginning of November there was not a gmina cooperative in which coal supplies were not low. In the same period of time, the country area near Lodz received more coal than last year. No shortages are seen in coal deliveries due farmers in connection with contracted-for agricultural products.

Health services, schools and preschools are the first to receive fuel. To date, none of these institutions has complained of coal shortages.

There are instances where coal allotments have already been made for the whole year, but they have not changed since 1954. Meanwhile deliveries of the highest-grade coal are diminishing. If only for this reason that more coal is needed.

Anna Orzechowska

Cold Radiators

Even if the entire planned delivery of coal for the Opole Province were made, there would still be shortages of 50,000 tons as compared with the actual needs. At present, 42 gmina cooperatives are receiving railroad deliveries of coal and 15 are being supplied by trucks.

Educational institutions and health services were supplied with coal in the third quarter.

Fourteen gmina cooperatives have no coal at all. According to Pawlowiczki Gmina Manager Kazimierz Kuczynski, the greatest shortages are in coke deliveries. In Opolszczynia, newly-erected residential buildings have central heating, therefore use of firewood which is being suggested to householders does not solve the problem. The allocation norms theretofore applied to coal for the vital needs of rural residents do not correspond to actual needs.

Czeslaw Kantorczyk

Only 40 Percent [of Plan Implemented]

Ryszard Drozd, president of the gmina cooperative in Doborszyce, Wroclaw Province, states: "We received the last sizable shipment in August and September--around 1,400 tons of coal in the course of 3 weeks. Since then, barely 200 tons of coal have been delivered, while delivery plans call for an average of 1,200 tons per month. Along with that, only approximately 40 percent of the planned annual deliveries has been carried out, and shortages reach back to the second quarter.

"The worst problem is with coke, for which lignite and mineral coal are being substituted in schools and health centers. There is also a substantial indebtedness to farmers with livestock contracts. We owe them 150 tons.

"Lately, at the farmers' request, we have been supplying coal to each individual rural area in turn. This will eliminate useless trips to warehouses in search of fuel."

Jerzy Hankiewicz

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ACADEMICIAN INTERVIEWED ON INVESTMENT, CONSUMPTION

Belgrade DUGA in Serbo-Croatian No 175, 8 Nov 80 pp 22-23

[Interview with Nikola Cobeljic, member of the academy, by Misko Kaleric]

[Text] The first question put to Nikola Cobeljic, member of the academy, went like this: You recently said that investment policy faced very important obligations and tasks. To what extent has investment policy up to now been the result of a deliberate long-range and planned conception and to what extent the result of certain haphazard processes?

The first question and the first response: "For a long time now investment policy has been faced with what indeed are exceptionally large tasks and obligations: elimination of the sharply pronounced disproportions in physical production, above all a disproportion between expansion of the domestic raw materials base and development of the manufacturing industries; reduction of the dependence on imports and general economic dependence on foreign countries, that is, dependence on them for development and technology; augmenting the export potential by raising the technical level of the economy; and resolving the acute problems of unrestrained [otvorene] unemployment."

Cobeljic went on to say: "Medium-term social plans over the last decade, though with a large time lag, have clearly set forth those goals and priorities in production and investment. However, if we look to see how they have been carried out in practice, we ascertain without difficulty that these tasks have been left unrealized to an extreme degree. The problems have become more acute and thanks to their occasional cumulative and heightened impact, they have been creating increasingly difficult crisis situations in the economy."

A moment later the man whom I was interviewing became still more specific: "These tasks can be solved effectively only if there is a socially organized system for guiding investments which will among other things ensure that investment resources have the necessary mobility to move in accordance with the main lines of development that have been set forth. In the absence of that kind of social coordination, investment activity has mainly taken place as the sum total of individual investment plans and projects;

it has been characterized by the fact that the resources represented by savings are widely scattered in small amounts and are firmly tied to the region where they were created, and at the same time there has been a broad front of investment projects not subject to effective social control.

"Consequently, a concise answer to your question would be that a sizable portion of our investment projects have been the fruit of haphazard action and of individual decisions not related to one another, and to a less extent has it been the fruit of a deliberate policy of long-range development and of everything that such a policy implies with respect to institutions, measures and resources that would constantly and appropriately support that policy."

Investment Projects: Bottleneck

The second question was this: To what extent can capital investment projects now under way present new surprises, that is, do they mean the creation of new "bottlenecks"?

"This fear seems to me very realistic, especially if we judge by the trends that have manifested themselves up to now and if we bear in mind the present lack of social organization in this decisive area of economic life. Investment projects now under way may indeed create unpleasant surprises, new 'bottlenecks' and new problems which will be all the more difficult for being built onto a production structure which is already profoundly disrupted and which in and of itself is determining the long-term nature of economic instability and accordingly the extent to which it is realistically possible to effectively carry out stabilization policy itself."

The third question: Certain lines of development were emphasized even in earlier plans, "but the list of priorities was excessively broad, so that the policy of adopting priorities lost its true importance." Is this not why the expected results were not forthcoming in certain key sectors of the economy?

Academician Cobeljic began by saying that the broad list of priorities was the result of bargains and compromises among the republics. He then immediately added: "This factor has certainly been largely involved in the fact that the expected results were not forthcoming in precisely those key sectors where the shortages and imbalances were most pronounced and which tended to spread the adverse consequences throughout the entire economy. The length of the list of priorities tended to scatter forces and resources, made it more difficult to concentrate the resources available in those areas of production whose long years of retarded development have not only caused major domestic delays and disturbances, but also increasingly large and intractable problems in the sphere of our international economic relations, thereby undermining both the domestic and foreign economic equilibrium of the Yugoslav economy."

Fourth question: After reminding Dr Cobeljic of his opinion that the present disproportion between the goals of development policy and the means of carrying them out needs to be corrected, I asked: What is the most effective way of correcting that disproportion?

In speaking about this disproportion Dr Cobeljic is thinking of the following things and factors: "For a long time we have had the notion of the absolute primacy of an economic system conceived in the spirit and logic of laissez faire principles to which long-range development goals have been subordinated, which is why they ended up on a neglected side track. This is how a kind of substitution of ends and means came about! But even when that conception became less important, the discrepancy between the ends and the means was not overcome, but continued to be a concomitant characteristic of our economic development. Thus in the early seventies we abandoned the previous development conception, which was based on one-sided expansion of the manufacturing industries and in principle adopted a new strategy with essentially altered production priorities. However, even today the basic features and mechanisms of the economic system have not been adapted to that new strategy.

"The inconsistency between the ends and means," Nikola Cobeljic said, "as well as the lack of appropriate features of the system have on the one hand brought about a truly uncontrolled situation with respect to self-management agreements and accords, and on the other a steady strengthening of ex post facto administrative interventions, which by their nature follow in the wake of events and skim over the surface of the problem."

Cobeljic stated emphatically: "It is to the credit of economists that they have ascertained the weak points quite definitely, those components and those areas of the system which come into direct collision with the development policy that has been adopted and are indicating the methods and mechanisms for correcting that disproportion."

Accumulated Problems

"The goals of development adopted through the self-management democratic procedure of enactment of plans ought to be the asymptotic points toward which coordinated social actions and all the essential solutions in the economic system converge. One of the basic questions of the next plan is that of effectively coordinating those closely interrelated aspects of development. Certainly this will not be easy to do, since that kind of reform of the system presupposes a change in the previous conditions of conducting economic activity and a change in previous modes of behavior." He then said: "Without that kind of coordination, without authentic management mechanisms which will provide the necessary guidance and coordination at the level of the entire economy, without a clear set of measures directed in a unified way toward achievement of the goals and priorities set forth in the plan--and that is what has been most lacking in the institutions for conclusion of social compacts and self-management accords and has made them ineffective--it is difficult to believe that the accumulated

critical problems of our economy will be corrected and reduced to a more tolerable measure and that the fundamental goals of development policy will be achieved in an effective way."

Fifth question: The gap between physical output and consumer appetites, which have grown very rapidly, creates the idea that we are spending to a fair extent at the expense of future generations. Do you have that impression?

Economist Cobeljic cautioned at the very outset:

"With our present consumer orientation and consumer demands it is an illusion to expect that we will balance our economic trade with foreign countries in the foreseeable future. The economy's low rate of accumulation has been caused by the inadequate growth of labor productivity, by physical disproportions, and by the decline in the real importance of qualitative factors in the conduct of our economic activity and in the overall growth of the costs of economic development."

Cobeljic naturally notes the other side of the coin as well, and he says: "The other side is made up of the pronounced cases of unreasonable behavior and anticipated expenditure at the expense of future generations, which have been made possible by loopholes and inappropriate solutions in the present system governing the conduct of economic activity. They are manifested inter alia in the fact that all forms of current expenditure are rising faster than labor productivity; they have been facilitated and encouraged by the fact that we have a depressed level of depreciation which is not keeping up with the inflationary loss of value of fixed capital, while working capital is not evaluated at all, which is why a portion of income occurs that is fictitious and is undeservedly distributed and spent. Finally, they have been facilitated by the negative interest rate on borrowed public funds, since interest rates are barely half the present rate of inflation.

"The orientation toward foreign capital has therefore become one of the long-term structural characteristics of the Yugoslav economy. Savings—which have not originated in domestic labor and the domestic conduct of economic activity, but is external in nature—have attained a more than important proportion of our net investments in fixed capital, more than 40 percent in the overall."

Cobeljic went on to stress: "I think that our system and the entire functioning of the economy would be different and more optimal if Yugoslavia relied more on its own sources. An erroneous picture of great prosperity is created in this way, and spending is allowed to increase without concern, constantly exceeding our ability to produce. But even this has its limits. We have already come into an unenviable situation where a rate of economic growth that is at all acceptable can be maintained only at the price of a large deficit in the balance of payments and galloping growth of the economy's foreign debt."

The Effects of Keeping Up With the Joneses

The sixth question: "One of the recipes for stabilization, if I have understood you correctly, is to accentuate domestic saving. What forms of domestic saving do you have in mind?"

"There are quite a few things in our consumption which are disturbing. Sound research shows that under the influence of the effects of keeping up with the Joneses those components of consumption which coincide with the consumer habits of the Western world are becoming increasingly pronounced. There is quite a bit of irrationality, frivolousness and snobbery in our consumption. This mentality of prestige is also making strong inroads in the areas of public expenditure and social services. Were we to correct these nonoptimal aspects, we would appreciably reduce the waste of natural and other resources, which is substantial. We would make the total costs of social and economic development more bearable. And with a smaller production and more modest growth (some economists estimate even a drop in output by one-fifth) we could under certain conditions meet the real and authentic needs more fully, which, among other things, presupposes a higher quality and longer service life."

Seventh question: Some economists feel that not a single social plan has been altogether fulfilled since 1961. Do you share that opinion?

Cobeljic told us that this question could well have been omitted. Why? There is simply nothing debatable here, nor is there any ambiguity about it. "These matters are so well known that there is nothing one can do even with the best will in the world. Though perhaps we might add here only a fine distinction and an addition. When people talk about nonfulfillment of the plan, they are usually thinking about a quantitative failure to achieve the principal planning projection, the basic dynamic quantities. In our case it is not just a case of that, but also of the fact that economic events were in their tendencies and general directions often the opposite of the goals that had been declared! This merely demonstrates the extent to which the planning component, along with other economic mechanisms for regulation, has been neglected in the processes of guiding social and economic development." That is the flavor of what Nikola Cobeljic, member of the academy, has to say.

We left the question about the next plan for the end of the interview. What are the basic problems in it? we asked the professor.

"A brief answer cannot be made to that question, since the therapy for our pains is not a simple matter either. Much of this has piled up in the course of time and become tangled into a knot which is not easy to undo. Nevertheless, it seems that the most important thing is a sufficiently deep and full comprehension of the seriousness of our economic situation, for people to realize that we face several difficult and lean years which will require considerable sacrifices, and that we must adapt our behavior and our responsibilities to that fact. Here I am thinking particularly of the

need to combat all particularism, autarky in the republic and region and the predominance of individual interests over common interests. Like it or not, we will have to rely more on our own energies and resources and we will also have to turn more fully toward our own science if we are to prevent a further widening of the technological gap and avert the ever more obvious danger of becoming a satellite of the advanced world in the fields of science, technology and development."

Academician Cobeljic also offered specific solutions: "... In our development strategy there ought to be much more emphasis on those sectors and activities which are primarily based on domestic resources. I include in those sectors agriculture, whose development potential we have been neglecting up to now, though it undoubtedly contributes to solving the structural problems of our economy and offers conditions for more lasting and full employment of domestic factors of production.... And then within the industrial sector, we unquestionably should include the production of non-metallic minerals, the wood industry, the building materials industry, along with construction and housing construction. This large production complex, which is largely made up of labor-intensive activities, would make it easier to solve the problems of uncontrolled unemployment, and its more dynamic expansion would not increase the pressure on the balance of payments."

Finally, Cobeljic concluded: "In that way our overall development would take on a more strongly pronounced social-welfare orientation, since unemployment and the housing shortage are the two most pronounced sources of social inequality...."

When this interview was over, this newsman was almost obsessed by the thought: how unfair it is that those who have something to say don't say more!

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